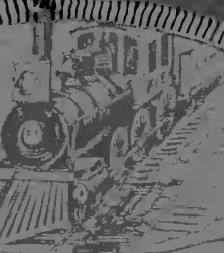




ILLUSTRATED
ANNUAL
EDITION OF THE

DULUTH



DAILY NEWS

1889

KIMBERLEY, STRYKER & MANLEY

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KIMBERLEY, STRYKER & MANLEY

OFFICE: 5 and 6 Duluth National Bank Bldg., Duluth, Minn.

THIRD ILLUSTRATED ANNUAL EDITION

OF THE

DULUTH DAILY NEWS

1889.

An Historical and Statistical Review of

DULUTH

The Metropolis of the Northwest.

ITS PAST, PRESENT AND FUTURE.

*A Compendium of Facts Illustrated with
Original Engravings.*

DULUTH, MINN.:
DULUTH NEWS CO., PRINTERS AND BINDERS.
1889.

Feb 4
1888

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PREFACE.



T is with great pride and satisfaction that we present this, the Third Annual Edition of the News to our readers; pride, which finds its justification in the record of Duluth's progress, making the publication of the Annual possible—satisfaction, arising from success and the cordial and liberal encouragement accorded our efforts.

The facts and figures are for the year 1888 only and have been gathered and compiled as carefully as possible. In many instances no official records were available, as for instance the building statistics, which could be gathered only by a careful visit from house to house, so that if anything, the figures given will fall below the actual amount of money expended. In every case the figures are official, unless otherwise stated; estimates have been avoided so far as possible, and when given were made conservative. Typographically we have tried to maintain the high standard which has added so much to the success of the Annual in former years. The book proper is free from any advertisement whatsoever, though a careful perusal of the advertising pages will be found profitable as well as interesting. The introductory article is from the pen of Wm. F. Phelps, Secretary of the Duluth Chamber of Commerce. Most of the illustrations are from the drawings of Mr. John H. Parrott, New York City. And thus we leave the Third News Annual to the judgment of the thoughtful reader. The facts here presented merely indicate the future, the record of which will be presented in the News Annuals as the years roll by.

Respectfully,

THE DULUTH NEWS CO.

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A Great Trade Center.

THE growth of great trade centers must follow, but cannot precede, the development of the tributary country from which they derive their support. Thus, the New York and Chicago, the Boston, Baltimore, and Philadelphia of to-day would not have been possible fifty years ago. They have been made what they are through the natural advantages of their geographical positions, supplemented by the support given them through the progress of the great agricultural and mineral regions penetrated by the railway lines, whose traffic comes to them to be exchanged for the tonnage received from the commercial pathways of the high seas.

Indeed, the conjunction of these land and water lines, stretching over vast spaces, reaching for the varied products of different and distant lands, and people of diverse wants and pursuits, seems to be essential to the development of commercial cities of the first class. Geographical positions, affording commanding natural advantages must be joined to equally important artificial conditions, created and fostered through the intelligence and enterprise of man, in order to secure those elements of permanent growth which have created the imperial cities that have wielded the scepter of commercial supremacy over large areas and through long periods of time.

Inland Points This seems to be the law of the development of great trade centers. A careful examination of the location and history of existing centers with the causes that have built them up will verify this proposition. It is manifest, therefore, that no mere inland points, depending mainly upon railway transportation can in any prope

sense, become permanent trade centers. They may be prosperous for a time, through proximity to rich agricultural, lumbering and mining regions, joined to the favoritism of discriminating railway rates, but the laws of nature and of trade will, sooner or later, assert their sway, and the true centers will be found at the points where the long lines of land and water traffic converge, and the reciprocal exchanges of products and commodities between distant regions are finally effected.

Pertinent Illustrations. In the light of these simple yet comprehensive truths, it is not difficult to discern the causes of the rise and progress of the great cities of the world, where the exchanges of the world are carried on. New York could by no possibility have been what she is in any spot less favored by nature.

The same may be said of Philadelphia, Baltimore, Boston, Buffalo and Chicago. They are the outgrowths of the advantages of their fortunate geographical positions at points where vast systems of exchanges between distant and highly productive regions must necessarily occur, involving a great concentration of population, wealth, enterprise, and the innumerable activities of civilized life.

First Movement of Population. The westward tide of immigration first flowed along the line south of the great lakes, to the rich plains of the central states, Ohio, Indiana, Illinois, Missouri, Kansas and adjacent communities. In its onward sweep, involving the development of the magnificent resources of these regions, the prosperous cities of Buffalo, Cleveland, Toledo, Detroit, Chicago, Omaha and Kansas City, arose like magic out of the trackless forest and the virgin prairie. Of this chain of cities, Chicago is

the miracle of modern trade centers, due to its more commanding geographical position.

Duluth and Chicago—Strategic Position. A clear understanding of the strategic importance of Duluth and Chicago as commercial centers demands that the geographical relations of the great lakes, near whose headwaters they respectively stand, should be brought into view.

A glance at any correct map of the United States will show that Lake Superior

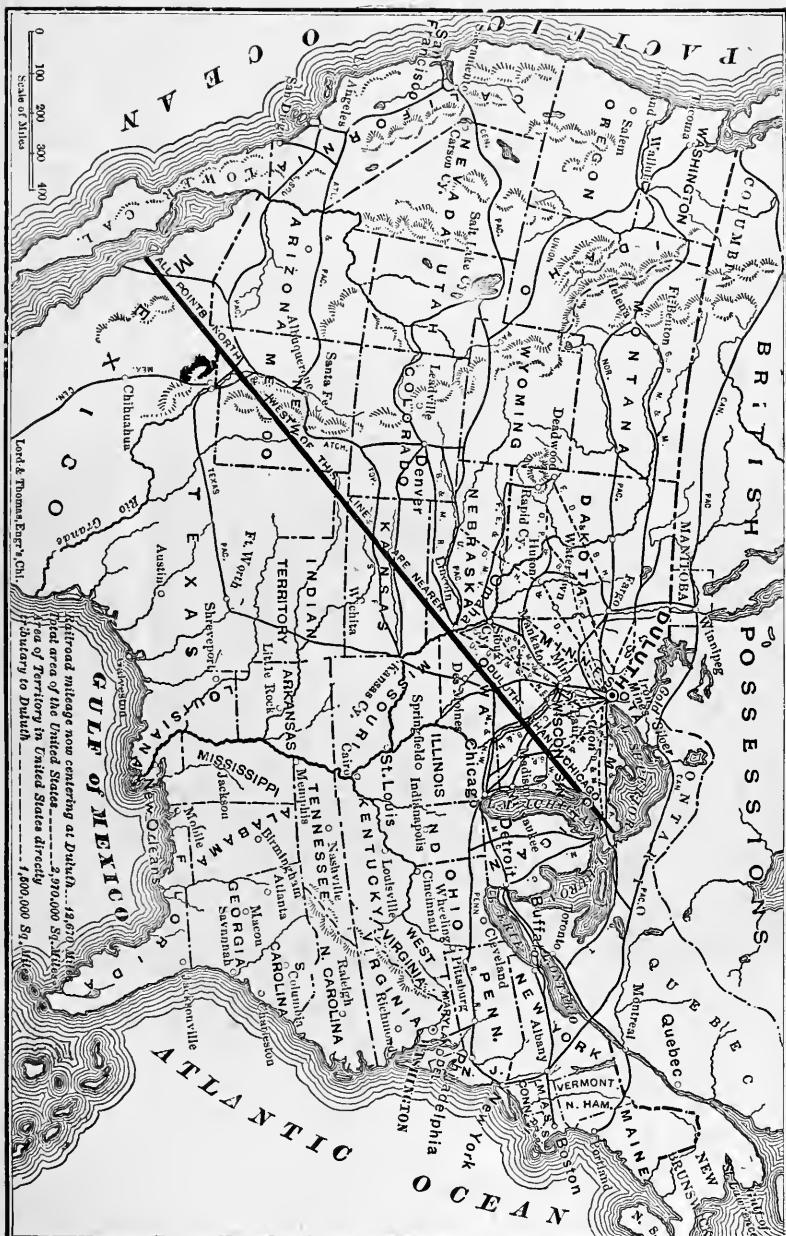
vastly increasing the area of its tributary territory in that direction. If a straight line be drawn uniting the two cities, and this line be bisected by another, commencing near the eastern end of Lake Superior and extending southwestwardly to the Gulf of California, near the twenty-seventh parallel, this latter line will represent with geometrical exactness, all points equidistant from Duluth and Chicago respectively. Hence, all places north of this line will belong, legitimately, to



THE O'BRIEN & KNOWLTON BLOCK.

rior lies along the parallels and Michigan on the meridians. The two are, therefore, at right angles to each other. Superior, however, extends three hundred miles farther west than Michigan, giving to the tributary territory of the former the resulting advantages of three hundred miles more of deep water navigation westward than the latter possesses. The opposite shores of Lake Superior for more than half its length, bearing to the west by south, converge at Duluth in such a manner as to point, like the "finger of destiny" to the

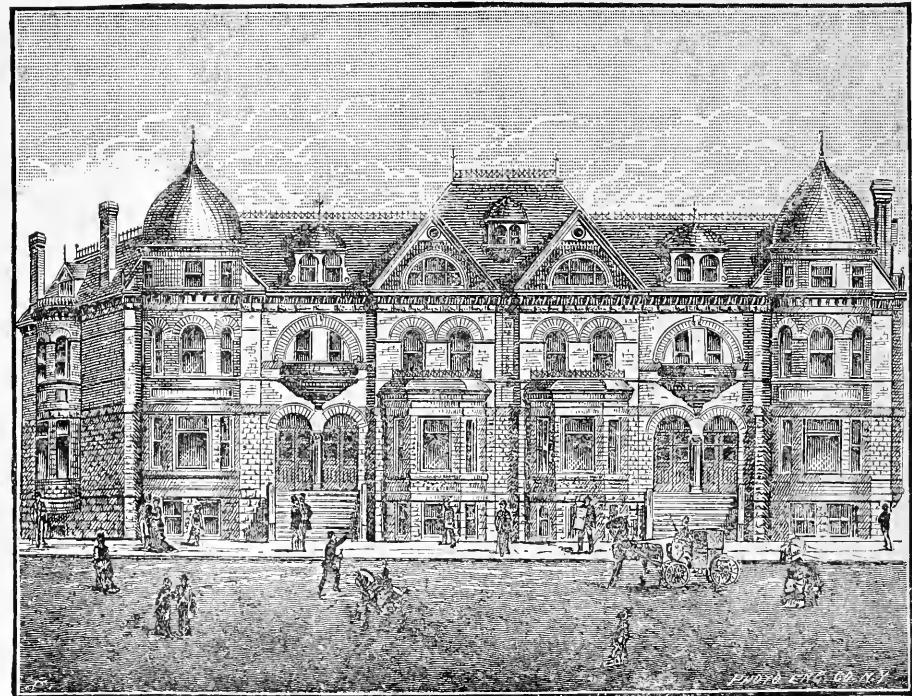
Duluth's tributary belt. This fact is today shaping and controlling the railway development of the country northwest of the line described. All roads in this vast region are now pointing toward Duluth as their ultimate objective, because they thus secure the shortest, and therefore the cheapest line to deep water navigation. By virtue of the relative positions of the two lakes, moreover, the distance of these two cities from the eastern seaboard by water, is practically the same. While a vessel from Chicago is traversing the length



of Lake Michigan to the north, the Duluth ship is moving directly on its eastward course, and the two will be substantially together some where near the head of Lake Huron, and will thus have the chance of an equal race to Buffalo.

Second Movement of Population.—The development of the country between Lake Superior and the Pacific Ocean is a comparatively recent movement. It did not fairly commence until after the construction of the Northern Pacific railway was inaugurated. With the progress of that great enterprise and others of a similar character, notably the St. Paul,

commerce of these regions in its eastward flow has sought deep water navigation at Lake Superior on the shortest and most direct line. The development of a new and commanding trade center at Duluth, on the extreme western limit of the chain of lakes has been, and is thus compelled by force of its splendid geographical position, the movement of population along its contiguous parallels, and the opening up of the magnificent grain fields, rich mineral regions and extensive forest areas stretching along the grand portage between the great lake and the Pacific Ocean at Puget Sound. This wonderful movement has



THE SALTER ROW.

Minneapolis & Manitoba, and the Canadian Pacific systems, the influx of immigration has been immense, and the settlement of the extended area of agricultural and mineral territory, comprising the states of Minnesota and Oregon, the territories of Dakota, Montana, Idaho and Washington, and the provinces of Manitoba and the Canadian Northwest, has advanced with a rapidity quite unprecedented, and the

been powerfully promoted by the government improvement of the water-way connecting Lake Superior with the lower lakes along the St. Mary's river. It will be still further reinforced by the construction of the new railway lines south of Lake Superior, giving a new and shorter route to the eastern seaboard, and by roads from Manitoba, now projected and being built to the city of Duluth.

Improvement of the Waterways. The difference in elevation between Lakes Superior and Huron is nearly twenty feet, eighteen and five-tenths feet of which is at St. Mary's falls where a canal 5,400 feet long has been constructed, with an immense lock, having a lift of eighteen feet, a length of 515 feet, and a depth of sixteen feet, allowing vessels of more than 2,000 tons register to pass freely between the upper and lower levels of the chain of lakes. Further improvements, on a gigantic scale, have been projected and are now in progress, under the authority of the United States government, by which the capacity of the canal and its approaches will be increased to correspond with the rapid growth of the already vast commerce of Lake Superior. The canal is to be deepened and otherwise perfected, another lock, 800 feet long, 100 feet wide, with twenty-one feet depth of water on the miter sills, is being constructed, and the approach from below is to be shortened by improving Hay Lake channel, thus effecting a saving of eleven miles in distance over the present detour through Lake George in British Territory, the navigation of which is impracticable at night. With the completion of these works, which will cost the government about \$7,000,000, the capacity of the vessels navigating Lake Superior will be greatly increased, and its commerce will be augmented with the development of the country, beyond all present power of computation.

According to official government statistics, thirty-three per cent of the vessels and forty per cent of the tonnage passing through St. Mary's canal into Lake Superior are engaged in the Duluth trade. It is therefore clear that the improvement of the great waterway must exert a powerful influence upon the growth of this new commercial center so rapidly advancing to the front rank of great western cities.

The Lower Lakes. Another factor of prime importance in the future growth of Duluth is the gradual yet comprehensive improvement of the canals connecting the lower lakes and the river systems leading to the eastern seaboard. These canals are being con-

stantly widened and deepened to admit of the passage of vessels of greatly increased tonnage, and there is no reasonable doubt that this work of enlargement will go on until ships drawing twenty feet of water and carrying three to four thousand tons burden will, within a comparatively few years, be able to float with their immense cargoes from Duluth "unvexed to the sea", and thence to the commercial marts of the old world.

In this work it must be confessed that our Canadian neighbors, with no more than a tithe of our population and resources, are at present in the lead. They have a well defined system of these waterways, including the Welland canal, connecting Lakes Erie and Ontario, and others overcoming the obstructions in the St. Lawrence river. With them it is only a question of further enlargement and increase of capacity when their vessels of the first class will be able to reach the open sea. In our own case we can boast only of the St. Mary's Falls canal, now undergoing enlargement, admitting ships drawing twenty feet of water, and the improvement by dredging to the requisite depth of Hay Lake channel, and the St. Clair flats.

Two Rival Waterway Systems. There are thus likely to be two rival systems, the Canadian and our own. Our next step will be the construction of a canal around the falls of Niagara. A project looking to the inauguration of this colossal undertaking has been outlined by a provision in the river and harbor bill of the present session, for the survey and estimate of the cost of a "waterway around Niagara Falls, of capacity and facilities sufficient to float merchant ships, and ships of war of modern build, drawing twenty feet of water, said waterway to commence in a navigable part of Niagara river, in Niagara county, at or near Tonawanda, New York, and to end in the navigable waters of said river below said falls, or in navigable waters connected therewith."

An American System Demanded. The completion of a distinctively American system of communication would further necessitate the enlargement of the canals from Oswego

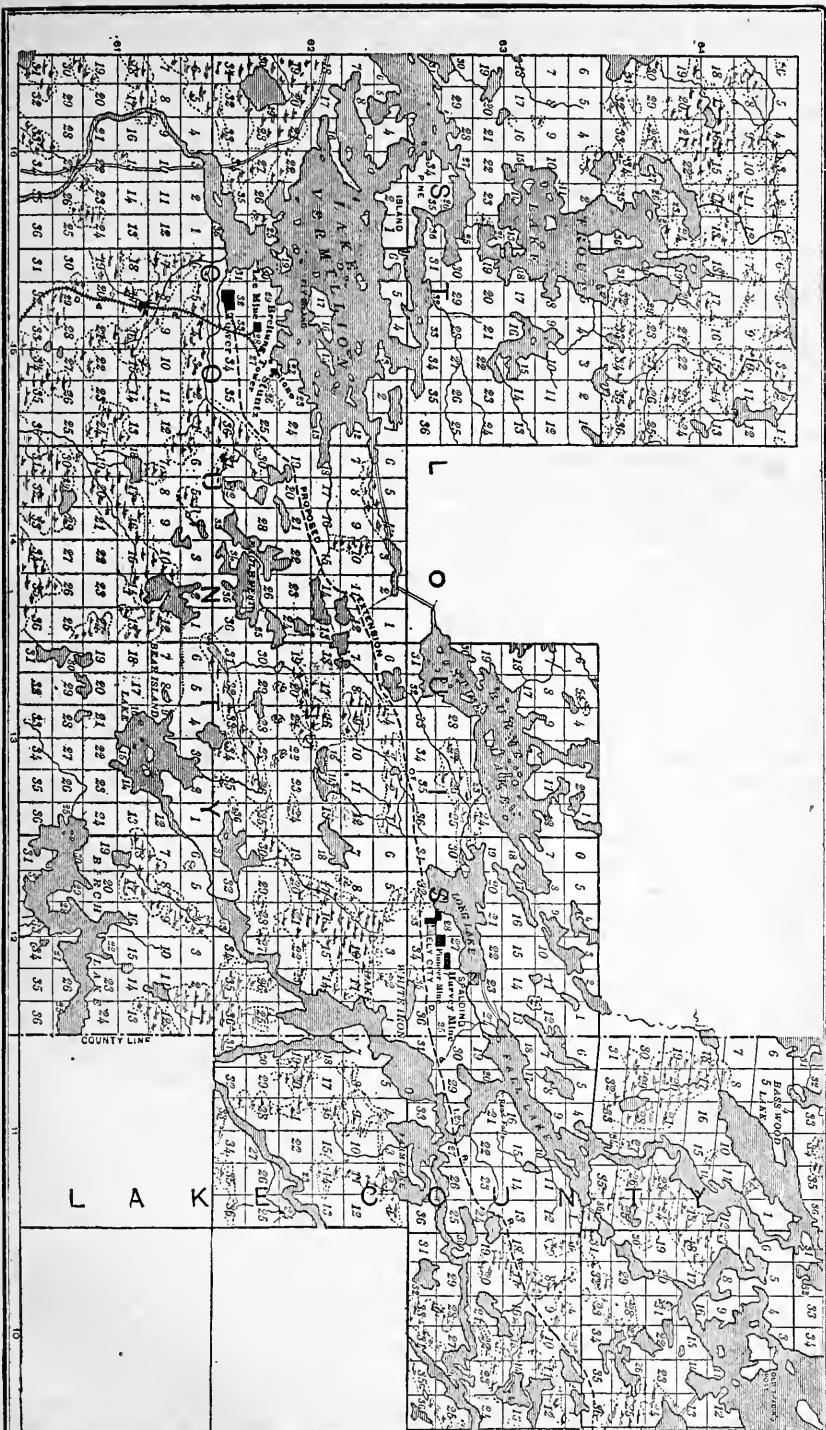
to Syracuse, and thence to the Hudson river, to a capacity sufficient for ships of twenty feet draught. In the absence of this achievement, so important to the continued commercial supremacy of the city of New York, vessels would find their direct pathway from the head of Lake Superior to the ocean via the St. Lawrence river, and thence to the leading ports on both sides of the Atlantic without breaking bulk. This would be virtually equivalent to an extension of an arm of the sea to the heart of the North American continent. With the enormous growth in population and wealth sure to be realized in the future of this great Northwest, the opening of this system of waterways is no idle dream of the imagination, but, on the contrary, will surely become an imperative necessity and an accomplished fact. The natural resources of this region, almost continental in extent, including every variety of agricultural, mineral and other products, have as yet been no more than touched by the magic wand of industrial enterprise. Not five per cent of the arable land, including the most wonderful grain belt in the world, and extending far into the valley of the Saskatchewan and the Canadian Northwest for more than a thousand miles, is yet under cultivation, although already being penetrated by railways aiming at the head of Lake Superior as the nearest and most accessible point for reaching deep water navigation. Not one per cent of our varied and inexhaustible mineral deposits has yet been uncovered. Sandstone, slate, granite, iron, copper, lead, silver and gold in quantities beyond the power of estimate exist in the regions bordering upon this great inland sea. Billions of feet of valuable timber still remain standing in the forests that skirt its silent shores.

The East India Trade.—Nor should the recognition of another fact of great importance in its bearing upon the future of this city be omitted here. As has been aptly expressed, Duluth is in the pathway of empire. It is on the transcontinental line that connects, by the shortest route, the navigable waters of the great lakes with those of the Pacific ocean. This results not only from the

peculiar conformation and indentation of the "arms of the sea" at each extremity, but from the diminution in the length of the degrees of latitude.

In the able report of Edwin F. Johnston, Esq., the first engineer in chief of the Northern Pacific railway, it was shown that the distance from Puget Sound to the principal Atlantic seaports is 600 miles less than from San Francisco to the same points. It was also shown that, owing to the direction of the marine currents between the coasts of Eastern Asia and Western North America, eastward bound vessels were borne in a northerly direction to the shores of Oregon and Washington, whence they were obliged to make their way southward to San Francisco, at a loss of several hundred miles in the voyage. It is thus made to appear that the pathway of commerce from China, Japan and the East Indies is determined by natural conditions and that it lies along the parallels that embrace the belt traversed by this great railway system and its related transportation lines leading to the eastern seaboard. It is a law of commercial intercourse beyond dispute, that traffic will eventually seek the shortest route between the points of production and distribution. The saving of a few days of time, or even a moderate reduction in the rates of freight and insurance have often destroyed old trade centers and created new ones. Now it is clear that these facts bear a close relation to the question of the transportation of goods and merchandise from the East Indies to the commercial marts of both sides of the Atlantic. It is already a common event for cargoes of tea and other East India products destined to New York, Boston and Philadelphia, to reach those cities by way of Puget Sound, the Northern Pacific railway and its eastern connections.

While this paragraph is being revised the following statement clipped from a daily paper of October 9, furnishes a forcible illustration of the point under consideration. "The sailing vessel, George S. Homer arrived at Tacoma on Saturday with a cargo of tea, having made the remarkably fast trip of thirty days from Yokahama. The mail which left Yokahama three days later by steamship, with



MAP OF THE VERMILION RANGE.

the papers relating to the cargo, arrived in St. Paul on Saturday after the vessel arrived at Tacoma. The tea will be shipped east over the Northern Pacific."

It is also a fact of no little significance that for two years past the daily tonnage passing through St. Mary's Falls canal has exceeded that of the Suez canal, from which it would appear that even the East India trade, that great prize, for which the commercial nations have, for centuries contended, has begun to move along the shortest line. As our facilities for transportation upon lake, land and sea are perfected along this "shortest route" it is not a violent presumption that Duluth will feel the influence of this powerful movement, and be carried forward to a corresponding degree of growth and prosperity.

Effect of these Conditions. With such possibilities of geographical position, agricultural, timber and mineral products, and with the steadily rising wave of population composed of hardy, resolute and enterprising men sweeping over the hills and plains of the Northwest, delving in its mines, leveling its forests, cultivating its now waste places and opening a track for the iron horse across the vast areas, what mind can conceive, or who can estimate the prodigies of growth that must come to the cities along this wonderful "pathway of empire" and especially to that one which holds the key to the entire situation at the head of the great lakes?

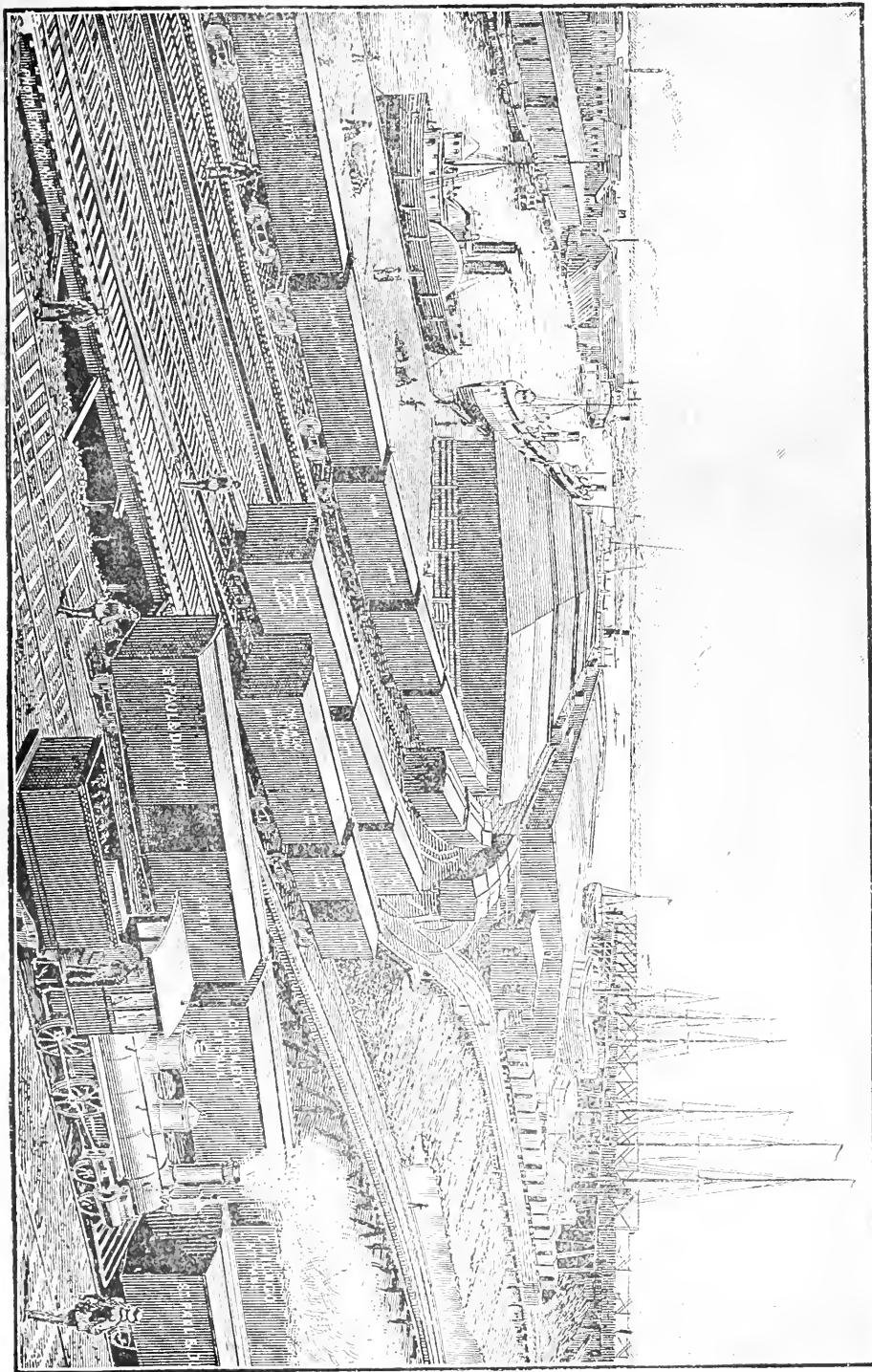
Influence Of Railway Development. Another prominent factor in the problem under discussion is the railway situation. Where deep water navigation ends, there adequate land transportation must begin. Where the immense tonnage of the lakes seeks the best available point for distribution, there the railway system *must* converge and *will* converge, because railways, as well as steam ships are built for the business of transportation, each in their respective spheres. It is primarily the lake trade that has built up Buffalo, Cleveland, Detroit and Chicago. It is the lake business that has drawn the railway systems to these prosperous cities. It is the reciprocal influence of both that has given to these commercial

centers their manufacturing plants, their jobbing houses, their strong financial institutions, their schools, churches, libraries, homes, and indeed all the adjuncts of their advanced civilization. What, therefore, the steam ships and the railways have done for the cities named, they will do for Duluth, in as much greater measure as her natural advantages and resources exceed theirs.

Systems Compared. Since, as has been shown, Duluth and Chicago has each its tributary belt by virtue of its closer proximity, so each must have its railway system reaching out into that territory. The Chicago system is already developed in its salient features and is far advanced toward completion. But a few years since it was the ambition of all railroads in the Northwest to reach Chicago. The consequence is that that city is today the center of the most extensive network of railways in the United States. This is simply the result of her commanding position near the head of Lake Michigan, making her the receiving and distributing point of a great extent of agricultural, mining and lumbering territory, lying along and between Lake Michigan, the Ohio river and the Rocky mountains. Through the stimulus of its system of lake and rail transportation, Chicago has built up immense manufacturing and jobbing industries and accumulated a population approximating 800,000 souls. What the joint action of these causes has done for Chicago, it will do for Duluth, whose situation and natural advantages are even more commanding than those of the Lake Michigan metropolis. In the wheat trade Duluth now leads Chicago, while for its raw materials, particularly its iron ore and lumber, the latter is receiving its supplies largely from the mines and mills of the Lake Superior region.

The Duluth System. The Duluth railway system is as yet but roughly outlined. It embraces three if not four Pacific trunk lines, one of which, the Northern Pacific, with numerous lateral feeders, is completed to Puget Sound and Portland, Oregon, and embraces 3,182 miles of completed track. The St. Paul, Minneapolis & Manitoba railway,

ON THE DOCKS.





with its many branches traversing the richest portions of Minnesota, Dakota and Montana, is completed from Duluth to Helena, and is pushing forward to the Pacific with Seattle as its probable objective point. It now operates nearly 3,000 miles of road. The Canadian Pacific, in close alliance with the Duluth, South Shore & Atlantic railway, 409 miles long, has already inaugurated traffic arrangements with Duluth, and within a few weeks will be running through passenger trains from the Zenith city to the eastern seaboard. It is well understood that this powerful corporation will soon build to a connection with its main line at or near Winnipeg on the west. The indications point to an early connection between Duluth and the Union Pacific railway, at Denver, Colorado, which is nearer the head of Lake Superior than to Chicago by at least 125 miles.

Besides these Pacific lines, built and being built to a connection with Duluth, there are the St. Paul & Duluth railway and branches, 235 miles, connecting the twin cities with Duluth; the Duluth & Iron Range, 115 miles, running along the north shore of Lake Superior, to Two Harbors, thence across the divide to Lake Vermilion and Ely, through the famous iron regions of Minnesota; the Chicago, St. Paul, Minneapolis & Omaha, and Chicago & Northwestern allied lines, with over 7,000 miles of trackage, connecting Duluth with the cities of Chicago, St. Paul, Minneapolis, Omaha and intermediate points; the Duluth, South Shore & Atlantic, from Duluth to Sault St. Marie, with a branch to St. Ignace, on the Straits of Mackinaw, where it connects with the New York Central system through the Detroit & Mackinaw; the Wisconsin Central, 507 miles, and the Milwaukee, Lake Shore & Western, 470 miles, the two latter entering Duluth on the Northern Pacific tracks, making a total of nine railways, with an aggregate trackage of 12,514 miles of main line and branches. The new and important roads being built and others projected and certain to be constructed, are perhaps more than double the number now in actual operation. Of the former, the Duluth, Red Wing & Southern, from the head of the lake to Sioux

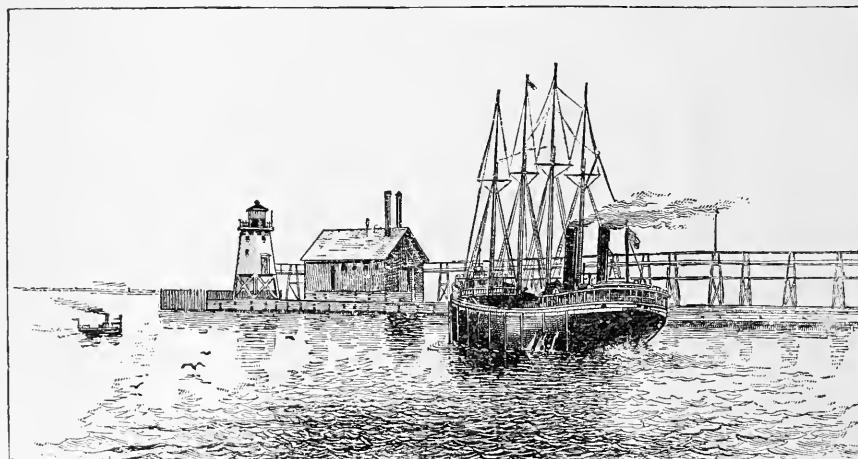
City, Iowa, and thence to a connection with the Union Pacific, the Port Arthur, Duluth & Southwestern, and the Duluth & Winnipeg are among the most important. The first will open the famous corn belt to the Duluth trade, the second will further develop the iron and silver regions of the north shore, while the latter will form a short line to the wheat fields of the great valley of the Saskatchewan in the Canadian Northwest, giving that country an outlet by way of Duluth and its dual transportation system to the markets of the world.

With the rapid growth of population and consequent development of the country embraced in the Lake Superior tributary belt, its railway system must necessarily be expanded until it shall become adequate to meet all the requirements of the situation. What these requirements are likely to be, may best be determined by an estimate of the area, the resources, and the wants of the country when it shall reach a density of population equal to some of the older states not equal to it in productive powers.

A Striking Contrast. Massachusetts, for instance, has probably the best developed railway system of any state in the union. She has a greater ratio of mileage to area than any other commonwealth. Her area is 7,800 square miles, her railway mileage at the close of 1887 was 2,531 miles and her population by the census of 1880 was 1,780,085. But Minnesota has more than ten times the area, productive power and natural resources of Massachusetts. Hence, when in the future she shall become as densely populated and as well served with the means of transportation as the latter state, she will have not less than 25,000 miles of railway and 17,000,000 inhabitants. And again, Dakota has more than twenty times the area and productive capacity of Massachusetts. It may therefore be assumed that the future railway mileage and population of these two contiguous communities will surpass those of the old Bay State to an extent equal at least to the preponderance of their size and resources, and their transportation system must ever continue to

gravitate to and focus at the head of navigation on the greatest of the chain of lakes. Were Minnesota and Dakota today in possession of the same relative population and railway mileage as Massachusetts, they would aggregate not less than 60,000,000 people and 70,000 miles of railway. What effect such a state of facts would have upon the destinies of the Zenith City may well be left for the arithmetical faculty of the reader to determine. If he has a disposition further to forestall the possible events of the coming years let him carefully calculate the area of the remaining territory whose proximity to Duluth brings it clearly within its tributary domain, give it

dalles of the St. Louis river, twelve miles distant. The lower bay comprises three square miles of waterway within the established dock lines between Rice's and Minnesota Points, all available, when the improvements shall have been completed, for navigation and anchorage to vessels of the largest class. St. Louis bay, between Rice's and Grassy Points, forms a secondary harbor for four miles. The whole harbor system affords a perfect refuge against storms and abundant room for the mercantile marine of the entire chain of lakes. Duluth harbor proper is easily and safely entered from the lake through a ship canal nearly three hundred feet wide and fifteen



THE HARBOR ENTRY.

a density of population and railway mileage relatively equal to those of Massachusetts and he can revel at will in the stern logic of figures more expressive than those of rhetoric, and of truths the realization of which will be more strange than the revelations of the wildest dreams of romance.

The Harbor of Duluth. The enumeration of the many and varied natural advantages of Duluth as a commercial metropolis would be radically incomplete without some reference to its spacious and wonderful harbor, for this is its crowning excellence. It embraces a series of bays and river-reaches from Minnesota Point, which shields it from the storms of the lake, nearly to the foot of the

hundred feet long, running nearly parallel with the north shore. The canal is perfectly straight, in line with the track of vessels coming up the lakes, and has a depth of nearly twenty-five feet, which is steadily maintained by the ebb and flow of the current between the lake and the harbor.

Its Enormous Capacity. Some conception of the magnitude of the facilities afforded to vessels navigating these waters may be formed from a consideration of the following figures showing the length of dock lines, kindly furnished by Major James B. Quinn, of the United States Engineers, in charge of the harbor improvements. These figures in-

dicate, of course, the frontage of the docks, on the waters of bay and slip:

	Miles.
From the canal to the termination of the legal dock line near Grassy Point, the distance is.....	10
Length of dock face.....	70.9
	<hr/>
	80.9
 Along Minnesota Point.	
Length of dock line.....	6.27
Length of dock face.....	35.21
	<hr/>
	41.48
Total length of dock line and face in Duluth harbor,.....	122.38
Total length of dock line and face in Superior harbor.....	63.36
Total dock line and face between Minnesota and Grassy Points on both sides of the bay	186.24



RESIDENCE OF H. H. BELL.

Appliances for
Rapid Hand-
ling of Freight.

One more fact relating to the superb advantages of the dual transportation system of Duluth yet remains to be pointed out, and that is the wonderful perfection of the appliances for the rapid handling of the millions of tons of heavy freight exchanged here. The elevators, coal docks and warehouses are all constructed on the most liberal and comprehensive scale. The machinery for moving freight of every description, and particularly coal and grain, is of the latest and

most approved designs known to the carrying trade. The discharge and receipt of heavy cargoes is but the work of hours, and not infrequently of minutes, and the great ships are enabled without delay to unload, reload, and depart on the day of arrival. A few examples of this expeditious work will suffice to illustrate the point under consideration. The schooner "David Dows," the largest of her kind on the lakes, arrived at Duluth on a certain Friday night. At 7 a. m. of the following day she held a cargo of 2,100 tons of coal at the Ohio Central coal docks. At 7 p. m. she had unloaded, cleaned her hold, taken on board 78,000 bushels of wheat and was as ready to sail. The "Iron Duke" arrived "light" one day at 3 p. m. and at 5 p. m. the vessel cleared with 50,000 bushels of wheat for Buffalo. The steamer "Australian" and consort, a sailing vessel, arrived in like manner at 3:30 p. m. and cleared at 8 p. m., the former with 75,000 bushels of wheat and the latter with 52,000 bushels, or an aggregate of 127,000 bushels, all being the work of four and one-half hours. Such results as these are believed to be without precedent anywhere. They are in keeping with the comprehensive and colossal scale upon which Nature has laid out her work in this wonderful region. In the presence of such facts, human enterprise is compelled, as it were, to devise and execute its plans in harmony with the great

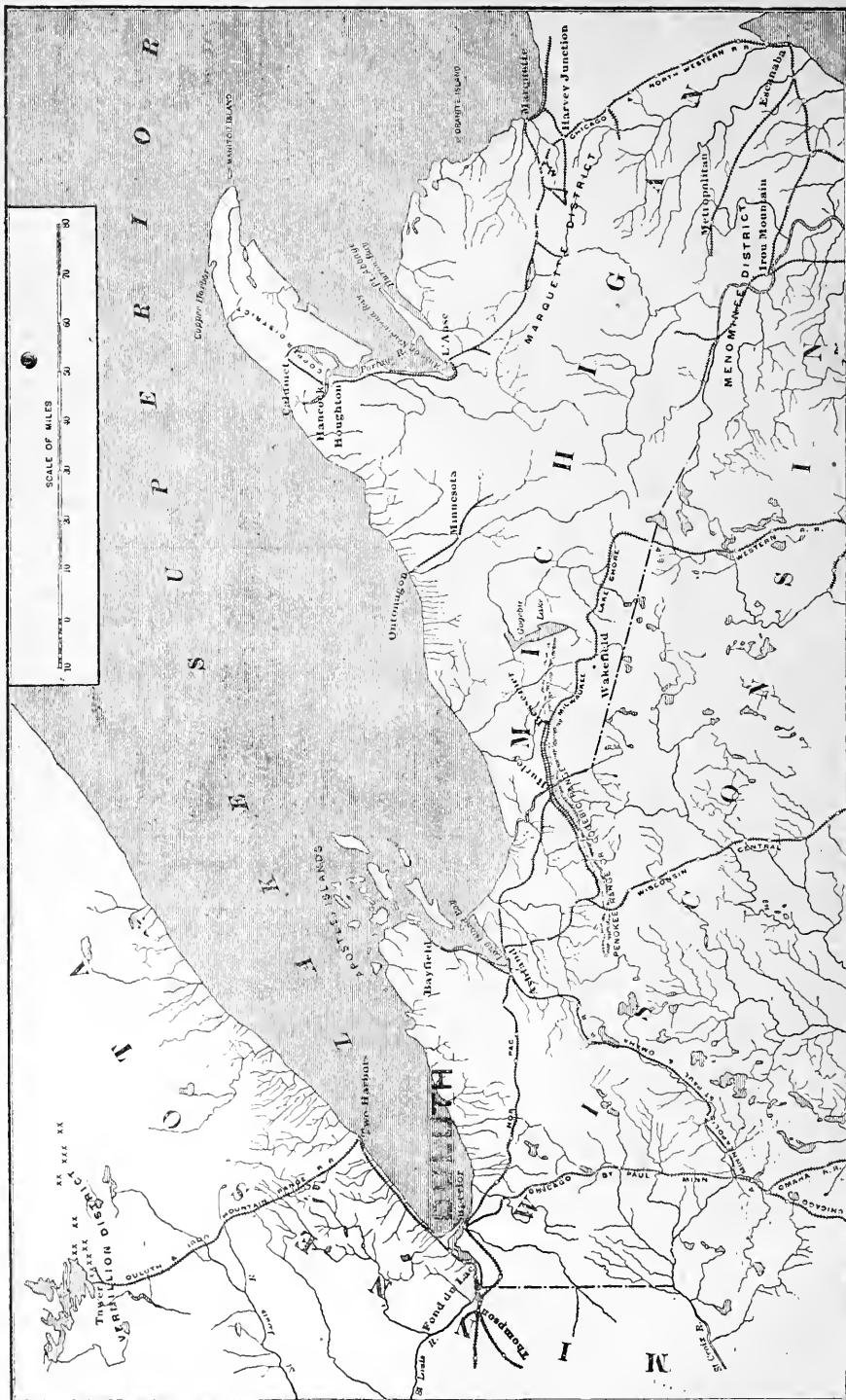
types that are ever before it.

Duluth's

Terminal

System.

As a necessary corollary of the comprehensive railway development in progress as outlined and foreshadowed herein, with Duluth for the objective point, it is pertinent to observe that a system of Terminals has been laid out within and near the city, for the accommodation of such roads as may hereafter seek an entrance thereto. These terminals will give all roads access on cheap and equal terms to the docks, warehouses,



MAP SHOWING DULUTH'S CENTRAL POSITION TO THE VERMILLION AND GOEBIC RANGES.

manufacturing establishments and jobbing houses in the city, furnishing side tracks and free switching privileges to the latter in the mutual exchange of freights destined for shipment either by rail or lake. Work on the terminal railway will be so far advanced as to make it quite generally available by the opening of the ensuing spring. It provides for elevated tracks

the docks, manufactories and jobbing houses on the other.

This important enterprise was inaugurated by the public spirited citizens of Duluth, with a supreme regard to the general welfare of the city as a whole. The franchises granted by the city council and by private citizens free of cost, while liberal in scope, are yet such as carefully to guard the interests of the people against all encroachments of corporate selfishness and greed. This important enterprise is justly regarded as finally settling the question of the future of Duluth as a great railway center, because it renders communication with the city throughout its entire business portions both easy and inexpensive, in the face of what have by many heretofore been regarded as insurmountable natural obstacles. The superficial notion that because the point of a bold rocky ridge projects itself toward the front near the center of the city site there is room for neither railways nor population is too absurd to need refutation. The ridge will soon be surmounted by a system of rapid



THE EXCHANGE BUILDING.

from the point of entry into the city to the Union depot for the passenger traffic, and a surface system upon which to conduct the immense freight business between the numerous railways on the one hand, and

transit, which will cover the plateau with beautiful homes, attractive parks and boulevards, and that which has been regarded as an obstacle to the progress of the city will be universally looked upon as one

of its most desirable and enchanting features.

General Summary. It has been the aim in the preceding discussion to present in as concise yet comprehensive form as possible the natural advantages and conditions that justify the conviction entertained by thoughtful men that Duluth must within a few years become one of the great trade centers of the Northwest and of the United States. The geographical position, the extent of tributary country, the variety and abundance of natural resources, the dual transportation system by rail and lake, the capacious harbor, complete terminal facilities and perfect appliances for the prompt transfer of the enormous tonnage received and distributed here, all combine to justify the conviction, and foreshadow a result that seems as inevitable as any future event can be. But it is neither irrelevant nor improper to reinforce this array of facts with the testimony of that which the past few years have brought to light as the result of the circumstances and conditions herein summarized.

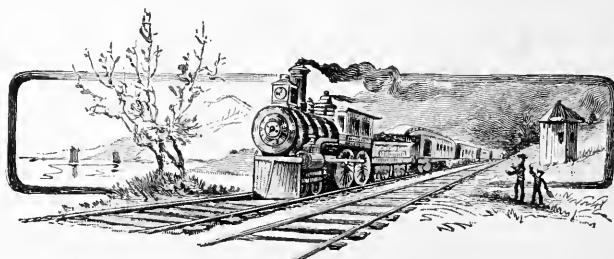
The marvelous growth of Duluth within the last half of the present decade is not an accident. Its causes are as clear as the light of day. They are efficient and permanent—not for a day, but for all time. What they *have* done they will continue to do with a steadily increasing momentum.

Growth of Population. The census of 1880 gave the then village of Duluth a population of 3,470. The state census of 1885 gave it in round numbers 18,000 people. Estimates based upon carefully collected directory returns in 1886

indicated 22,000 inhabitants, in 1887, 30,000, and during the present year 37,406, the multiple employed being less than three. Duluth became a city under a charter granted by the legislature in 1887. The next national census, to be taken in 1890, will doubtless substantially verify these estimates.

Conclusion. But it is unnecessary to multiply statistics further. The foregoing have been cited merely to verify and emphasize the conclusions enunciated in the preceding discussion. The copious statistical abstracts exhibiting the wonderful growth of Duluth in respect to its commercial, manufacturing, financial and general municipal interests given in their appropriate places in another part of the Annual will be found fully to justify the conclusions enumerated in the preceding discussion. A careful examination and comparison of these statements will, we believe satisfy the most skeptical reader that they represent only the modest beginnings of a social and commercial movement that is to pulsate to and fro like a mighty and irresistible wave across the continent and the encircling oceans, gathering added volume and strength with the lapse of years, peopling the plains, the forests and the mines with brave, hardy and resolute pioneers, who will develop the varied resources, build up happy homes, erect busy industrial establishments, construct lines of communication, organize schools and churches, carry with them every where the benign blessings of a free and enlightened government, and exemplify a civilization such as is enjoyed by no other nation on the earth.

Wm. F. PHELPS.



Suburban Duluth.

TWO years ago the expression "suburban Duluth" would have met with an incredulous smile. Now seventy trains per day are required to carry passengers to and fro between the outlying sections of the city, the adjacent towns and the city's business center. The throngs which pour out of these suburban trains as they draw into the Union depot are a constant source of wonderment to the stranger and a matter of constant surprise to the old settler who cannot for the life of him believe Duluth has made so great strides and of right assumed such metropolitan greatness as to have such an appendage as a suburb. But when one steps aboard an out-bound suburban train and visits the stations along its route, he is no longer surprised at the number of people who travel on these trains, but is amazed beyond measure to see the wonderful development which has taken place in so short a time.

The **East End.** The Searcher for a suburb takes a Duluth & Iron Range suburban train, and is whirled past great blocks of brick and stone; past warehouses; through railroad yards crowded with countless freight cars from many climes; past the slips of the broad harbor, where great steamships give up their vast cargoes or are loaded deep with the products of fertile prairie or prosperous mine or forest wild;—on he goes, to the right the dark blue placid waters of Lake Superior stretch far away; to the left the hillside covered with the homes of a prosperous people. Five minutes and he is at Endion. Ten minutes more he is at New London one of the loveliest spots for suburban homes in all the Northwest. New London was platted many years ago by men whose faith in Duluth has since been justified. It is a beautiful plateau, rock bound on its lake front and stretching

away from the lake for some two miles, with a finely graduated ascent sufficient to afford excellent drainage. All during the summer and fall of 1888 the mason's trowel and the carpenter's hammer have filled the air with their gladsome sounds, and here have grown up, almost by magic, one thinks who has not seen the place for a few months, many cozy and beautiful homes. The growth of New London has been extraordinary in 1888, but it promises to be much greater in the coming year. But the traveler cannot stop here. He is whirled along for another mile, where the laughing waters of Lester river come tumbling down over crag and boulder to meet the waters of the lake. Here the government has this year caused to be erected one of the finest fish hatcheries in the country, which is to replenish the streams and lakes of the Northwest with the finny tribes that have been all too ruthlessly exterminated. Away to the west of Lester river toward New London is Lester Park, which the Lakeside Land Company, who own both tracts, is fast putting into shape, and where, as soon as spring opens, an elegant summer hotel for tourists is to be erected. Beautiful in situation, endowed by nature with many advantages, capital and labor promise to make of New London one of the most favored spots in the New Northwest.

The East End has its alluring attractions, too, for the seeker after pleasure, rest and health. Different from the western suburbs, but not less beautiful, is the grand site and surroundings of the new hotel going up at Lester Park. Here, too, nature has scattered her favors with lavish hand o'er river, forest and glen, and he who is

"Slave to no sect, who takes no narrow road,
But looks through nature up to nature's God,"
can here find scope for his soul's fullest en-

joyment. The winding roads that lead one up hill and down dale, through Endion and New London, along the wild leaping Chester Creek, giving glimpses of the city, the lake and its shipping, and often the beautiful mirage of the opposite shores, that floats on the clouds for a moment like a greeting from our neighbors over the bay, affords one of the views for which Duluth is famous.

The fish hatchery on Lester river will be an additional object of great interest. The large hotel is to be a model of its kind, affording all the comforts and pleasures and less of the discomforts of the eastern summer resorts. Here the "hay-fever brigade" may find the balm in Gilead, a surecease from sorrow and pain, for no aching head, no aching lungs, no aching heart can long resist the magnetism of the glorious scenes and the bracing air that Duluth offers to all. And yet another. Take the Park Point street railway that runs down the long narrow strip known as Minnesota Point, and which forms the breakwater of the largest natural harbor in the world. Here where the breezes are never at rest, where the waves are seldom still, and cut off from the busy world by the waters of the great unsalted sea, one may rest in peace, and, sheltered by the waving pines, swing in his hammock and watch the white winged ships float by and dream of

"The mariner who first unfurled,

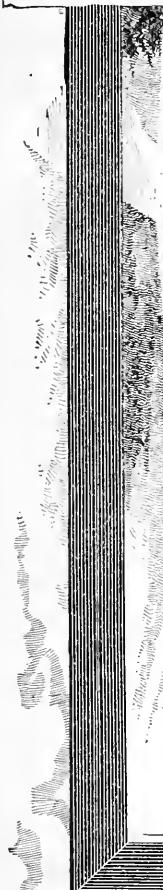
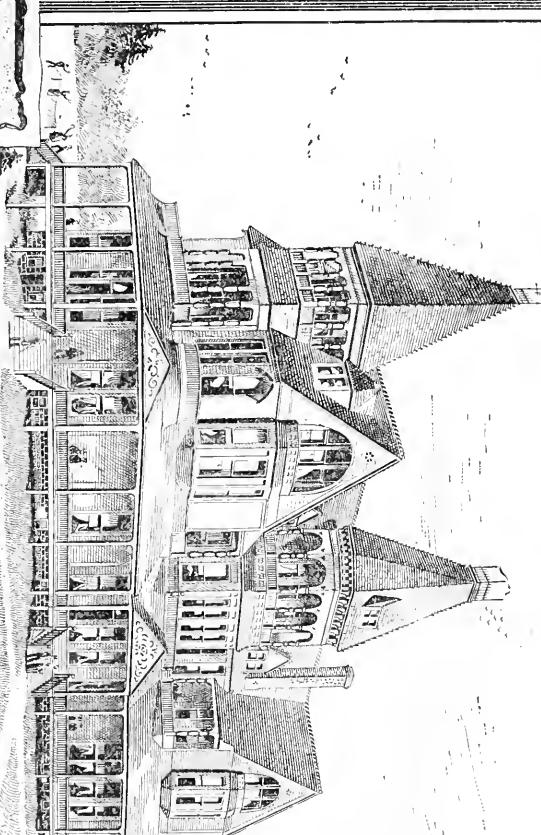
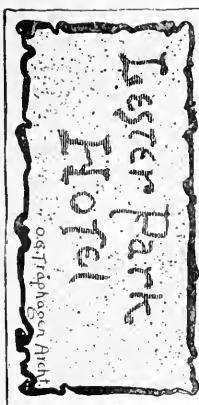
An Eastern banner o'er the Western world,
And taught mankind where future empires lay,
In these fair confines of descending day."

The Searcher returns to the Union depot with his West End. ideas somewhat broadened. He leaves his train, but finds another, of the St. Paul & Duluth system, waiting to take him to the suburbs on the west. He goes out through a maze of ship's masts, vast elevators, puffing locomotives on the one hand; on the other the endless rows of stores and shops and homes. "Twentieth avenue," the brakeman sings out, and the traveler looks about only to find himself still in the midst of the life and bustle of the thriving city; on again, past the great oil warehouses of the Standard Oil company, past the Sutphin packing houses and stock yards, and now the streets become irregular and houses "few and far between."

He smiles at the thought that this is "suburban Duluth." But his smile is short of life. "Oneota," calls out the brakeman, and pretty little homes surrounding a magnificent public school building, and a church steeple in the distance greet his eye. On again, and before he has recovered from his surprise "West Duluth" is ringing in his ears, and the crowded cars empty themselves, for here is the "New Pittsburg," the manufacturing section of Duluth, and the future great industrial center of the Northwest. Here all is life and bustle and activity. A handsome hotel, a commodious schoolhouse, graded streets and well-laid sidewalks; homes of frame and homes of solid brick; and away to the left on the bank of the great bay hundreds of workmen are engaged in building the great shops of the Minnesota Car Works company and the mammoth chimneys and buildings of the Duluth Iron & Steel works. A mile farther and West End is reached. Here new houses are seen on every hand, and when the thousands of artisans and laborers whose brain and muscle are to make productive the great works now building, there will then scarcely be room for a tithe of them unless hundreds of cottages are erected for them and theirs. But no fear need be felt on that score. The enterprise of Duluth has become proverbial, and while much was done in 1888—a city built where was a wilderness twelve months ago—1889 will still see greater strides, more wonderful development. The furnace fires of the only rolling mills in the Northwest will lighten up the city with their glow; an army of men will find employment here, and countless roofs give shelter.

And the *Searcher* for a suburb, with added faith in Duluth and with a deal less of conceit in himself returns to the city to reflect upon the wonderful achievements of the past and dream of the vaster possibilities of the future.

Park Point. That Park Point is destined to take an important part in the development of the Zenith City needs not be stated. Stretching out across the water from Minnesota to the Wisconsin shore, bound on the one side by Lake Superior; on the





other by the waters of the animated bay, its situation for health, beauty and convenience can scarcely be equalled. How much the new street car line just opened to travel will aid in its development can scarcely be imagined, but it will add greatly to those forces which are to accomplish great results for Park Point.

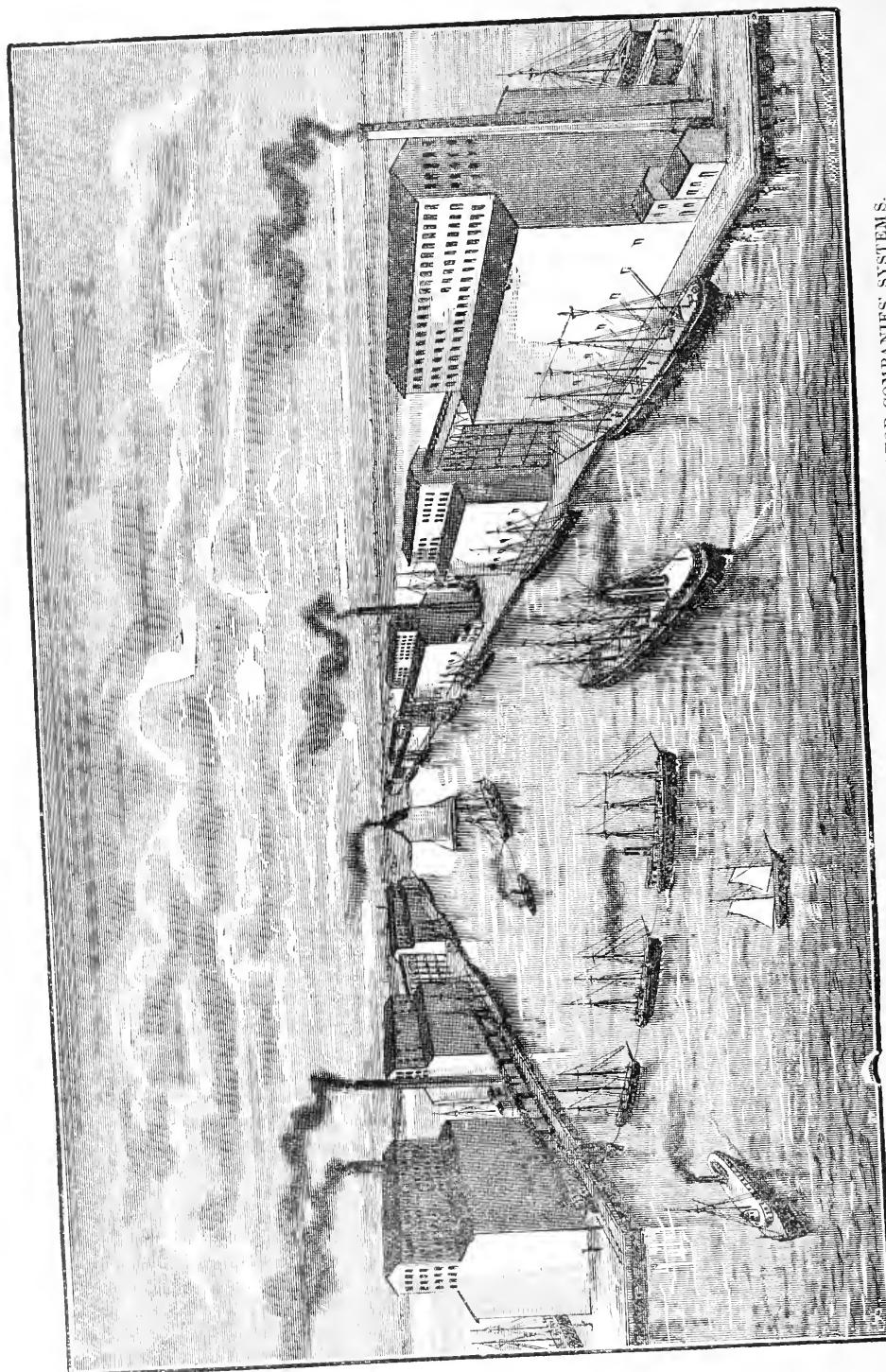
Already there are many points which attract the sightseer to Minnesota Point,

romantic beauty to the place, and promises to make of "the Point" one of the most attractive summer resorts in the Lake Superior region. The street car line starts at the canal on Lake avenue and for a mile and a half continues on that avenue, which runs quite near the shores of the lake. At Pine street the line turns down to Minnesota avenue, and out along this avenue the company will build two and a



and this street car line brings into easy reach all of them. The lovely groves of pine, so sweetly fragrant, the long beaches with their beautiful, many colored stones, the clear waters of the lake, the fine sweep of the broad bay—all conspire to lend a

half miles of track next summer. The company is now negotiating for the steel rails with which to do this work, and will do all in its power to aid in the development of this beautiful and interesting suburb.



THE LAKE SUPERIOR ELEVATOR AND UNION IMPROVEMENT AND ELEVATOR COMPANIES' SYSTEMS.

Duluth's Elevators.

NO city of its size in the world has so extensive an elevator system as Duluth. An important feature in the city's earliest history, the growing grain trade of the Northwest has made necessary constant additions to its elevator capacity. The elevator systems are in the hands of broad-gauged companies, who have constantly had in mind the improvement and increased convenience of their elevators. The result is that Duluth elevators are not excelled in facility in handling, and dispatch is one of the points upon which especial claims to distinction are based. An instance or two may not be out of place in this connection. One of the large grain carrying steamers which ply between Duluth and the cities of the lower lakes is the Onoko. Her capacity is 90,000 bushels of wheat—equivalent to 180 car loads. She has often arrived at the elevators after 7 o'clock in the morning, and been outside the harbor with her cargo in place and trimmed, her hatches battened down and everything shipshape, before noon of the same day. On one occasion this work was all done in 135 minutes, and her vast cargo of No. 1 hard wheat was weighed out of the elevator in 80 minutes. On one occasion two vessels, a steamer and consort, carrying 130,000 bushels, arrived in the harbor at 4 p. m. By 9, two hours later, both were on their way to Buffalo, loaded. This rapid handling of freight is of great advantage to vessels trading at Duluth, saving them hours and days of valuable time.

While the first thought of the elevator companies in building their great system was in the direction of the exclusive handling of wheat, the rapid development of the Duluth railroad system, which now penetrates the vast corn-growing districts of the southwest, has made Duluth a great

corn, as well as wheat, market, and the elevators here are equally well adapted to the handling of corn and coarse grains. Duluth is as near the eastern seaboard by water as Chicago, and much nearer a large portion of the corn-growing districts of the West and Southwest by rail, a fact which is diverting to this great maritime city much of the business which until lately Chicago looked upon as peculiarly her own.

The elevator capacity of Duluth has now reached the enormous total of 20,800,000 bushels. A list of the buildings together with their respective capacities is given below. In this list is included the elevators of the Duluth and Great Northern Elevator companies, which are located on the Wisconsin side of the bay. This is done for several reasons. The offices of these elevators are in Duluth. Every bushel of grain that comes out of them is inspected and its grade determined by Duluth inspectors, acting under the inspection laws of the state of Minnesota. Their warehouse receipts are made "regular" on the Duluth Board of Trade, and they are under heavy bonds to this Board of Trade, guaranteeing that the offices shall be in Duluth, and that their business shall be conducted strictly according to the laws of the state of Minnesota, and all the rules and regulations of the state board of railway and warehouse commissioners and of the Duluth Board of Trade, now or hereafter in force.

Following is a list of the elevators, together with their respective capacities stated in bushels.

LAKE SUPERIOR ELEVATOR COMPANY.	
	Bushels.
Elevator B	1,000,000
Elevator C	1,100,000
Elevator D	1,250,000
Elevator G	1,750,000
Elevator I	1,750,000
Warehouse 1	750,000
Total	7,600,000

UNION IMPROVEMENT AND ELEVATOR COMPANY.

Elevator E.....	800,000
Elevator F.....	1,500,000
Elevator H.....	1,30,000
Warehouse 2.....	650,000
Warehouse 3.....	700,000
 Total.....	 4,950,000

DULUTH ELEVATOR COMPANY.

Elevator 1.....	1,000,000
Elevator 2.....	2,000,000
Elevator 3.....	2,000,000
 Total.....	 5,000,000

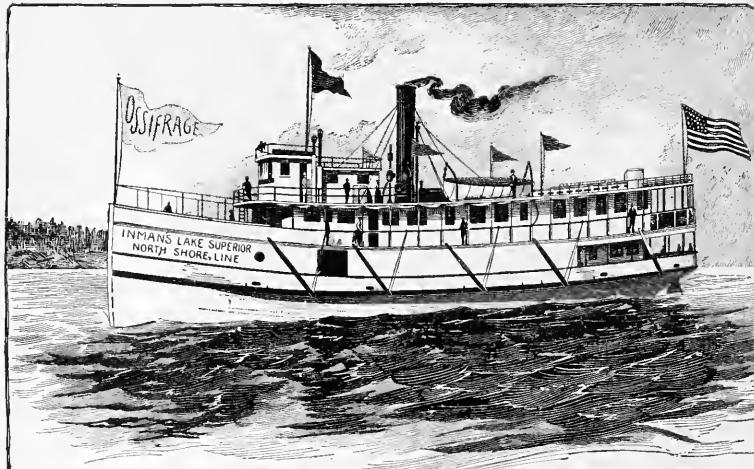
GREAT NORTHERN ELEVATOR COMPANY.

Elevator A.....	1,750,000
Elevator X.....	1,500,000
 Total.....	 3,250,000
Grand Total.....	20,800,000

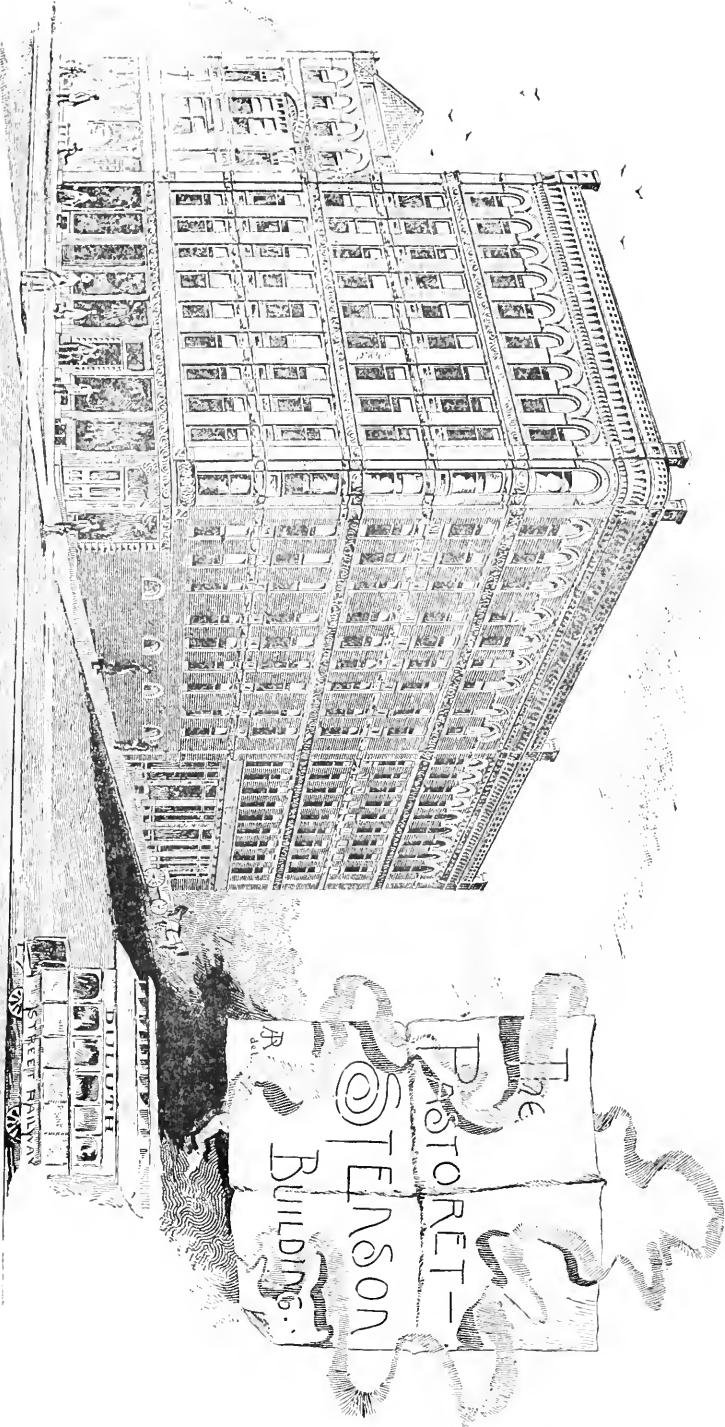
The Great Northern company have just

completed Elevator X, the only addition to the elevator capacity of Duluth for 1888.

Yet with this extraordinary capacity, the growing demands of the rapidly developing Northwest promise to make a large increase necessary at an early day. New farms, covering vast areas of the most productive wheat lands in the world, are being opened up each season, and the railroad systems building to Duluth bring to our doors the product of those sections heretofore remote. The elevator system of Duluth is destined to lead the world in its perfection of construction, facility in handling grain and vast storage capacity.



O. G. TRAPHAGEN, ARCHITECT.





The Coal Trade.

THE growth of the coal business of Duluth during the season of 1888, is but another evidence of the city's destiny as the great commercial center of the Northwest. It is no stretch of imagination to see in the development of this one line of trade a correspondingly rapid growth in all the branches of commerce, and that, too, at an early day. What is true of the coal trade re-

tage of the wonderful opportunities thus offered.

The development of the coal trade at Duluth has been rapid and steady. Previous to 1881, the Northwestern Fuel company was the only coal company doing business here. In that year the Lake Superior Coal and Iron company put in docks. In 1882, the Ohio Central Coal company began work on their big dock



THE PASTORET TERRACE.

garding advantages in freight rates is true of every other line of commerce, and the jobber who seeks to supply the Northwest trade at as low prices as Chicago sells to the territory tributary to that city, will not be slow to take advan-

and completed a sufficient portion of it to be able to receive a quantity of coal. The next year the St. Paul & Pacific Coal and Iron company became successors to the Lake Superior company. In 1884 the Pioneer Coal company received a small

amount of coal, and in 1886 the Lehigh Coal company was formed and built a dock at West Superior. Finding early in the season of 1888 that its vast dock at Duluth was insufficient for its rapidly increasing business, the Northwestern Fuel company took possession of the fine dock of the Duluth Elevator company at West Superior and erected a large trestle work and machinery thereon giving them a large additional capacity. Wm. C. Sargent added a capacity of 20,000 tons to his dock at the foot of Sixth avenue west, and the Pioneer Fuel company have erected on Rice's Point on what is known as the "old furnace" property, a dock having a capacity of 100,000 tons.

The following table indicates the receipts in tons, of the several coal companies for the season of 1888:

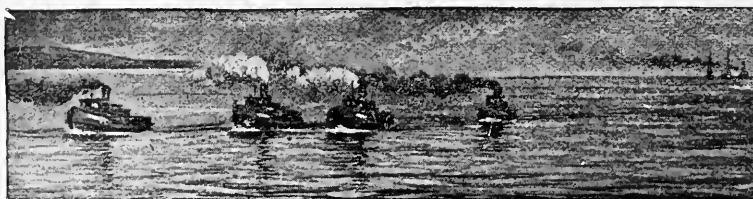
Duluth companies—	Tons.
Northwestern Fuel company.....	575,000
Ohio Coal company	335,000
Pioneer.....	75,000
Superior companies—	
Lehigh Coal & Iron company.....	350,000
St. Paul & Pacific company.....	200,000
Total.....	1,535,000

The Annual for 1888 predicted that receipts for the season would reach 1,500,000 tons. The above figures prove the correctness of the estimate.

It is interesting to note the steady development of the coal trade at the head of the lakes, and the following figures give total receipts in tons, each season for the past eight years. Every settler on the prairies of the Northwest makes a new customer for Duluth coal, and the increased traffic is evidence of the great development going on:

1878.....	31,000
1881.....	163,000
1882.....	260,000
1883.....	420,000
1885.....	595,000
18-6.....	736,000
1887.....	912,000
1888.....	1,535,000

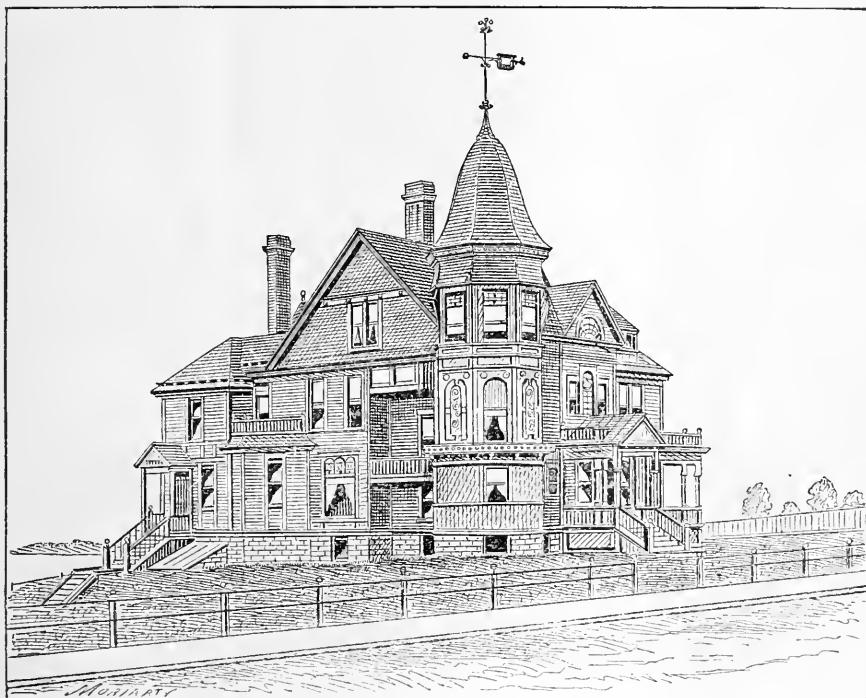
The increase in 1887 over 1886 was 25 per cent; that of 1888 over 1887, 68 per cent—an extraordinary showing. Every settler on the Northwestern prairies makes a new customer for Duluth coal, and the astonishing development of the business at Duluth is not surprising when one realizes the changes that are going on in the great empire of which Duluth is the key.



Duluth's Agricultural Resources.

ONE of the most important interests which has to do with Duluth's future, and the one thus far most neglected, is that of agriculture. There is a widespread opinion that the lands in the immediate vicinity of Duluth are not calculated for the successful growing of cereals and vegetables, and the home seeker has been all too prone to hasten by and establish himself upon the prairies of the West, when better lands, lying closer to

Louis river are vast areas of fertile soil, well watered and drained, which today can be bought at a low figure. These lands are destined to be the truck garden for a great city, for Duluth already demands more fresh vegetables than can at present be obtained, although she draws heavily on the resources of the more southerly portions of the state, and this demand is increasing with each passing year. The practical gardener, with capital to make a



RESIDENCE OF M. J. FORBES.

a cash market and susceptible of a greater diversity of crops, are waiting only to be subdued and cultivated to make the agriculturalist handsome returns.

All about the city, beyond the hills and stretching away along the length of the St.

start, however humble, would soon find himself on the road to fortune, did he faithfully and economically manage a farm within easy access of Duluth. Those who have engaged in farming about Duluth have met with fine success, and there are

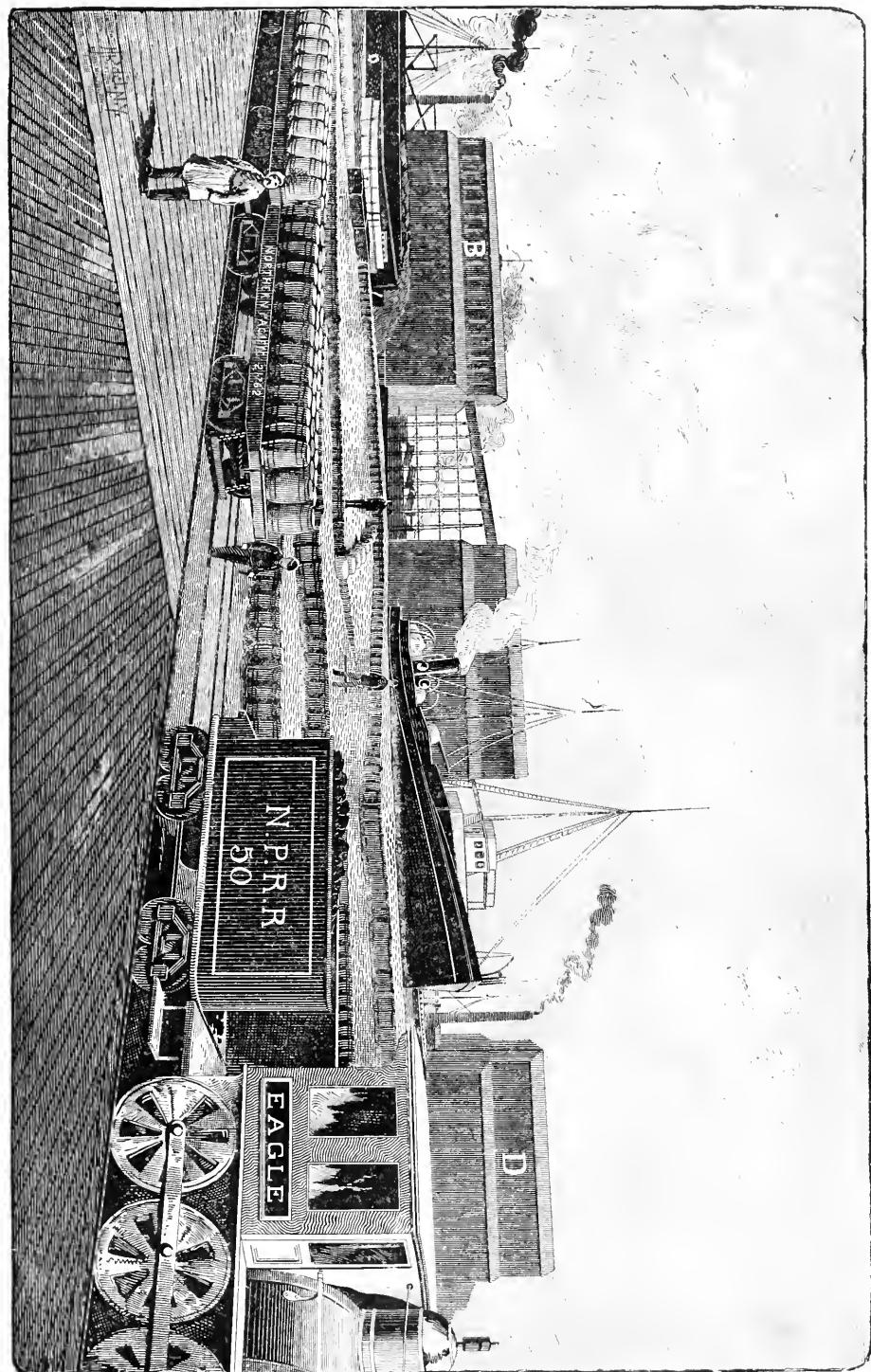
many thriving settlements all about our city peopled by prosperous farmers who are year by year bringing larger fields under cultivation, buying better machinery and making other additions to their working capital. The hotels of the city and the large number of passenger boats which visit Duluth daily during the summer, alone demand, and pay the highest price for, everything grown near Duluth, and then their needs are not half supplied.

The wheat raised about Duluth is conceded the best in Minnesota and has frequently taken the first prize at state fairs. All other cereals and the vegetables common to the northern climate are produced abundantly and are possessed of a rich and delicate flavor.

What is true of farming and gardening is equally true of poultry raising and dairying. Not a hundredth part of the demand in Duluth alone is met by the local supply of milk, butter, eggs and poultry, while in addition to the city demand there is a large and ever increasing call for supplies from the mining regions of the north. The vicinity of Duluth is an exceptionally good place for poultry raising on a large

scale, because of the unlimited supply of the best food which can be had almost for the asking. The millions of bushels of wheat which pass through the elevators of Duluth every year contain some shrunken and broken kernels which are not fit for shipment and some cockle and other seeds. These are taken out by the cleaners before the grain is shipped, and at present are burned, but could be put to a much better use as poultry feed. The luxuriant growth of grasses and root crops, the sheltered valleys, shady groves, and the numerous lakes and streams of sparkling water, make the vicinity of Duluth an ideal location for dairy farming. The establishment of great flouring mills like the Imperial mill, and of linseed oil mills on a large scale, which is certain for the near future, will make an abundant supply of bran and linseed meal, and the movement is already begun which will make Duluth as great a market for corn as it now is for wheat. No place in the world offers greater opportunities for the farmer or poultry grower than Duluth, and those who now take advantage of these opportunities will be assured of extraordinary success.





SCENE ON THE DOCKS.

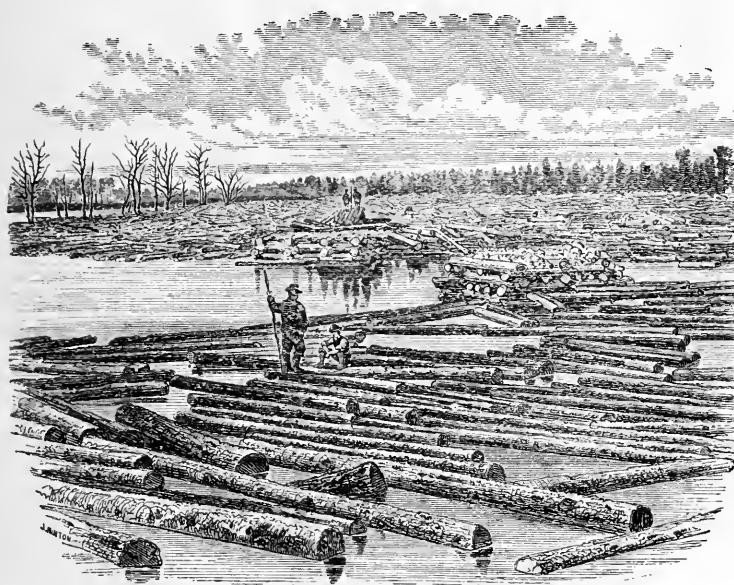


The Lumber Industry.

HERE is but one essential the Duluth lumber trade lacks to place it in the front rank of the city's industries, and that is organization. Up to the present year those engaged in the business throughout the entire district have almost wholly depended upon home consumption and a home market for the disposal of their product. The lumbermen of other districts and other cities have been only too willing to encourage them in pursuing such a line of policy. As one lumberman, a wide-awake new comer, expressed it: "Our people have been continually hedging them-

pine in almost unlimited supply directly contiguous to her mills, many millions of which are yet unexplored and yet an unknown quantity; with the best of rail and waterway facilities, annually growing larger and extending in all directions, for sending this product to market; with a natural and unsurpassed trade center for a starting point, there is no plausible reason why the lumbermen of Duluth, with the establishment of a lumber exchange and the fixing of a standard set of grades and prices bearing a distinctively Duluth trademark, should not, with combined and well

directed effort push this to the front of all Duluth's industries and even crowd Chicago, the present recognized lumber mart of the world, in competition for business at the four corners of the country. The one thing needed is organization; but it is noted with pleasure that a beginning looking to that end has already been agitated, and perhaps before another



DOWN AT THE BOOM.

selves in on a home market instead of organizing and reaching out after and pushing trade in the Eastern marts as well as in the far Southwest, the West and the entire new Northwest." With every natural advantage that could be wished; with the finest of

year passes the lumber trade of the Zenith City will be on a footing second to that of no place in the United States. To accomplish this organization will require a sacrifice on the part of someone, but it must be done to insure a footing for the traffic.

The Cut for 1888. Statistics of the cut for 1887 exhibited a total of 225,000,000 feet of lumber, 71,550,000 lath and 79,550,000 shingles, while for 1888 the figures collected show a cut of 195,794,000 feet of lumber, 26,570,250 lath and 80,413,250 shingles. At first glance to one unacquainted with the situation this will appear as a reduction of nearly 30,000,000 feet; but a satisfactory explanation may be made that will go far towards proving that, although a seeming reduction, the output for 1888 is a very gratifying exhibit. Early in the spring, after the large cut of the previous winter had been driven down the various streams and lodged in their respective booms along the St. Louis river, an unfortunate accident occurred which entailed enormous loss to the lumber firms of Cloquet, and consequently forced their mills to remain idle during a large part of the season and necessarily much lessened their intended cut. An unusually large snowfall visited the section during the winter and in the spring remarkably heavy rains were the rule for several weeks, and these combined so enlarged the several streams and waterways that the St. Louis river soon became a veritable torrent. There was no staying its power and, as was anticipated, the booms of the Knife Falls company at Cloquet proved too weak to withstand the strain and gave way, while nearly 80,000,000 feet of logs belonging to the C. N. Nelson and Cloquet Lumber companies came crashing and thundering down over the Dalles, landing in St. Louis bay.

These figures do not include the manufacture at Conner's Point, on the Wisconsin side of the bay. During 1888 the two firms on Connor's Point cut 27,500,000 feet of lumber, 9,000,000 lath and 13,800,000 shingles. Really this cut should be included in the Duluth district, as their business is mostly done in Duluth and the greater part of their logging done on Minnesota soil. Combining the cut would make a grand total of 223,294,000 feet of lumber, 35,570,250 lath and 94,213,250 shingles, a very creditable showing indeed. The larger part of this lumber was rail-roaded back to Cloquet, but much of it was parcelled out among the mills of Duluth while many million feet must necessarily

be carried over for another year. This will, no doubt, satisfactorily explain to the reader why the cut of 1888 did not exceed that of the previous season, as would have been expected under favorable conditions. The table given below will show the cuts in the several portions of the district:

Place.	Lumber.	Lath.	Shingles.
Tower	14,454,000	2,047,000	2,029,000
D. & I. R. R.	1,700,000	.....	.....
Thomson	13,000,000	2,500,000	13,000,000
N. P. Junction	14,500,000	2,000,000	2,500,000
Cloquet	93,440,000	17,893,250	43,134,250
Duluth	58,700,000	2,130,000	19,750,000
Total	195,794,000	26,570,250	80,413,250

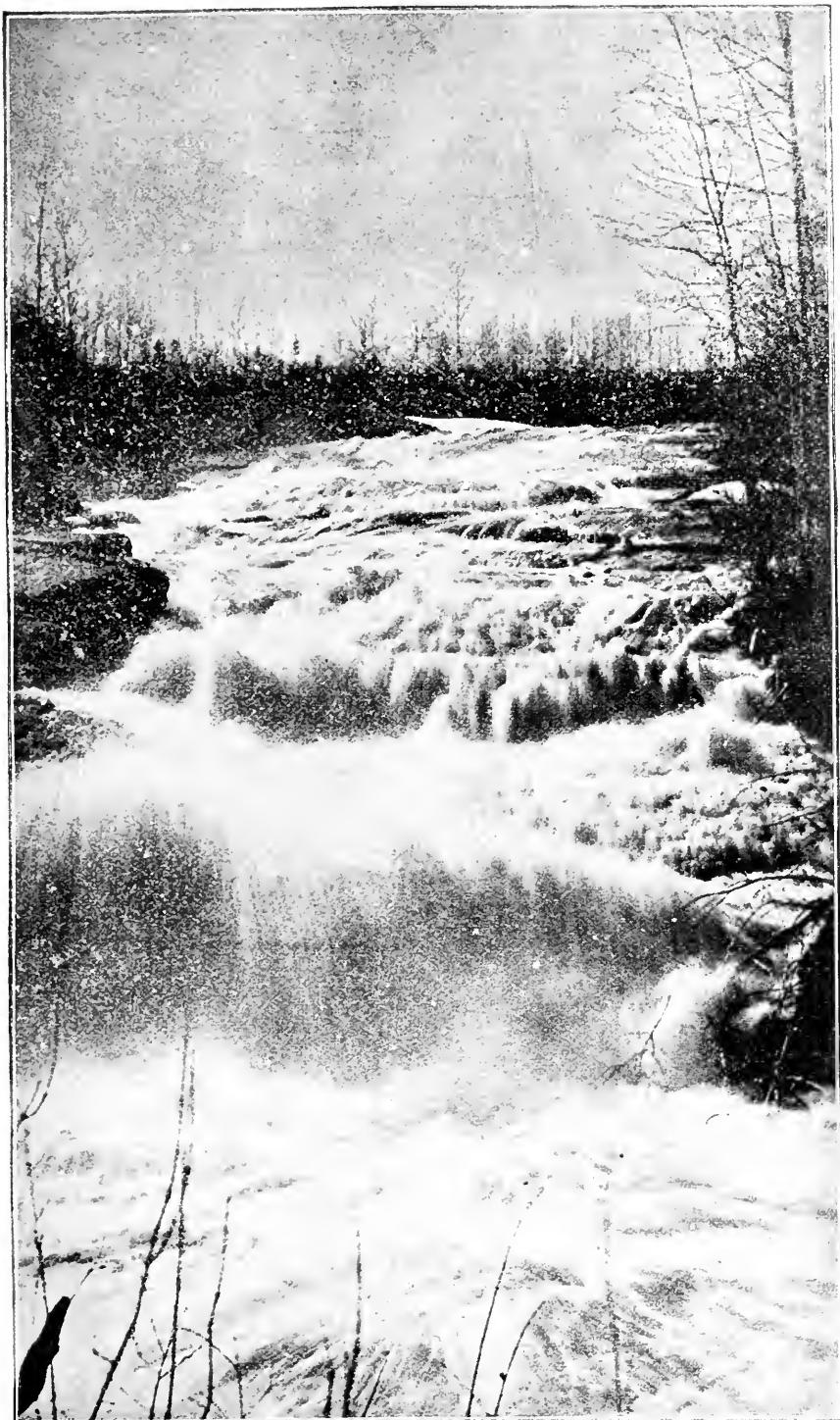
Estimates for 1889. The estimated log cut for 1889 is put at 198,500,000 feet, which is not so large

as the most sanguine have anticipated, but this may be accounted for by the fact that 21,912,000 feet will be carried over from 1888, while there is an unusually large amount hung-up along the several driving streams. The figures for the estimated cut and the amounts carried over at the several places are given here:

Place.	Carried Over.	Est. Cut '88-9.
Little Fork river .....	.....	8,000,000
Tower	850,000	20,000,000
D. & I. R. R. ....	.....	12,000,000
Thomson .....	.....	15,000,000
N. P. Junction .....	.....	12,000,000
Cloquet	9,562,000	84,000,000
Duluth	11,500,000	47,500,000
Total	21,912,000	198,500,000

Logging Much had been expected

Railroads. during the past year in the building of logging railroads, but while many of these have been planned for years past and without doubt will be pushed to successful completion in the near future, yet it appears that but one firm has made any substantial progress in that direction during the year. That firm is Williston, Charnley & Co., whose plant is located at Mesaba station, on the Duluth & Iron Range road. By the close of next year they will have four miles of logging railroad in operation, with an equipment of twenty cars and one sixteen to twenty ton locomotive. The road will probably be built to standard gauge. The company already have rail on hand for two miles of the road and will begin building early in the spring. By this means the firm intend to avoid the inconveniences of bad winters and do their logging only as the demand encourages it, cutting both winter and summer. This firm will also market 40 per



SCENE ON MILLER'S CREEK.

cent of their 1889 cut in Tonawanda and Buffalo, while they also intend to work for trade in other quarters.

The Paine Lumber company at N. P. Junction have had a logging road of eleven miles in operation for some time, while many others are planned for building soon.

Miscellaneous. It will not be out of place to again mention the fact that there is an almost unlimited supply of the highest grade pine tributary to this city, a fair estimate placing the amount yet standing at 2,000,000,000 feet; that there is every natural and artificial advantage here necessary for the manufacture of the product, and that Duluth is without doubt one of the finest markets in the whole country for trade.

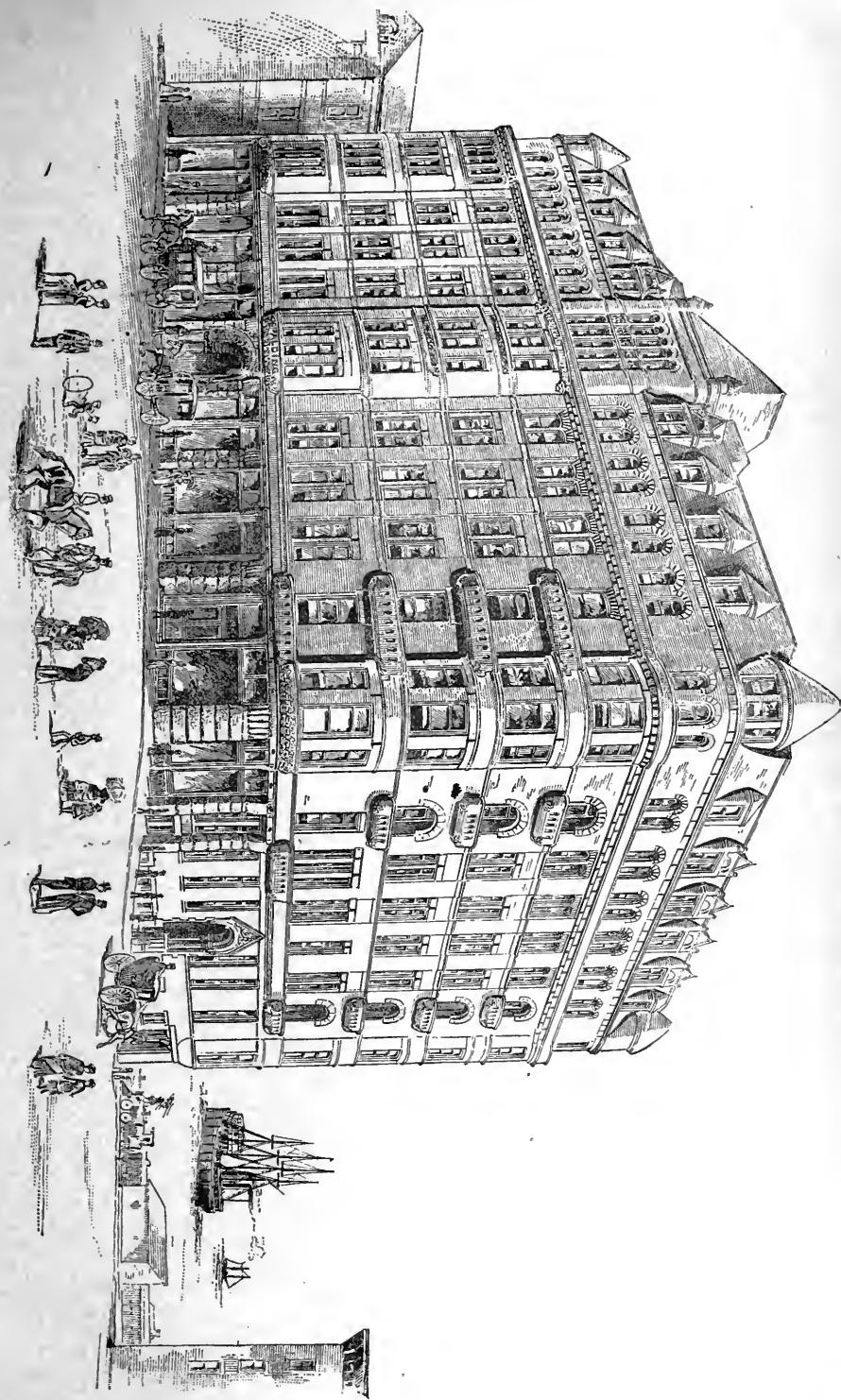
In this connection it should be stated that as yet little has been done here in the manufacture of hardwoods, and there are many splendid opportunities open for the business with plenty of good material to supply all demands. There is also in this vicinity an almost inexhaustible supply of cedar and other soft woods suitable for ties, telegraph poles, fence posts, piling, etc., and this field also offers special inducements to men with means and energy. In fact the entire timber business is yet in its infancy, but can hardly fail to develop with giant strides, with the great ad-

ditional facilities which are constantly being given it.

Many extensive improvements to mills and plants are contemplated for next season, the value of which will reach well up into the thousands, and the extension of the Duluth & Winnipeg railroad into the pine districts of the St. Louis river promises to aid in a great development of lumber industry.

Following are the names of firms at present doing business in the district, and it may be said that each and every member is a tireless worker in upbuilding the trade and adding to the prosperity and permanency of this future greatest of all trade centers: Giles Gilbert, Bradley & Hanford, E. L. Bradley, Huntress & Brown Lumber company, Morris Thomas, Wm. P. Heimbauh, J. G. Howard & Co., Duncan, Brewer & Co., C. B. Woodruff, Olean Land company, Williston, Charnley & Co., A. M. Miller, Asa Dailey, Graff, Murray & Co., R. A. Gray, Hubbard & Vincent, J. B. Noyes, Peck & Son, H. F. Petre, J. J. Shotwell, Swallow & Hopkins, John McKinley, Alexander Fraser, John Fraser, Duluth; Cloquet Lumber company, Water Power company, C. N. Nelson Lumber company, Cloquet; Howe Lumber company, C. L. White & Co., Tower; Paine Lumber company, N. P. Junction; Peyton, Kimball & Barber, C. S. Murray & Co., Superior.





THE SPALDING HOUSE.

Duluth's Mineral Resources.

THE Vermilion Iron Range commands the attention of the world. That a region so recently known to contain iron ores, and one whose resources have been so lately developed, should ship into the ore markets of this country such wonderfully rich and pure products is sufficient to warrant the attention shown to it by those whose interests are those of the iron trade and manufacture. This ore running high in metallic iron and low in phosphorous, silica and titanium, renders it as nearly as may be perfect for use in the Bessemer process of making steel; hence there is a ready market for all of it that can be mined and shipped. With the exception of the products of the Marquette district, it commands a considerably higher price than any other ore mined in America. It is not strange, then, that the Vermilion range, yet in the infancy of its history, should magnetize that capital devoted to iron mining and trade. Nor will a closer inspection of this district tend to discourage its thorough investigation.

The Tower Mine. Although the existence of a deposit of ore had been re-

ported for twenty years by those adventurous enough to brave the wilderness, nothing looking toward the development of the Vermilion range was accomplished until 1883. In that year the construction of the Duluth & Iron Range railroad was begun, and in 1884 was completed. In August, 1884, the first shipments were made, the seasons' sales being 62,124 gross tons. In 1885 the quantity rose to 225,484 tons, went to 304,396 gross tons in 1886, to 390,467 in 1887, and in 1888 reached the remarkably high figure of a half million tons. So great has been the demand for these high-grade ores that since the close of navigation many thousands of tons have been shipped by rail to the rolling mills of Chicago and Joliet.

The Tower mines are today the greatest iron mines in the world. A recent writer says of them:

"Nine pits have been opened in these iron mountains, the vast uncovered halls and chambers—whose walls are dyed in richer tints than those of Pompeian palaces—of a prodigious treasure house, where nature has stored wealth enough, perhaps, to pay the national debt. Each of these pits is furnished with all the appliances for excavating, handling and hoisting the ore and transferring it to the ore cars."

"Perhaps the most interesting feature of these mining operations is the completeness of the mechanical arrangements for economizing the labor and cost of shipping the ore. After the heavy masses of ore are picked up from the bottom of the mines by the stalwart miners and loaded into the mine car, it never is again handled manually till it is transferred from the hold of the vessel to the dock of the lake port to which it is destined. The mine car is hoisted to the level of the track over which it is moved, usually by machinery, to the end of a high trestle, which is also called a mine dock, and there its contents are tumbled into a pocket and chute, through which it falls into the ore car standing on the track below. The railroad is equipped with hundreds of double ore cars, which contain from twenty to twenty-five tons each, and with a large number of powerful locomotives to haul them to the ore docks at Two Harbors."

These ore docks have at present forty-six pockets on each side, or ninety-two in all, each with a capacity of 110 tons—a total of 10,120 tons. Each car is opened at the bottom and the ore dropped into the pocket under it, and then into the hold of the ship. At the present writing contracts have been let for the extension of these ore docks, and their capacity will be doubled.

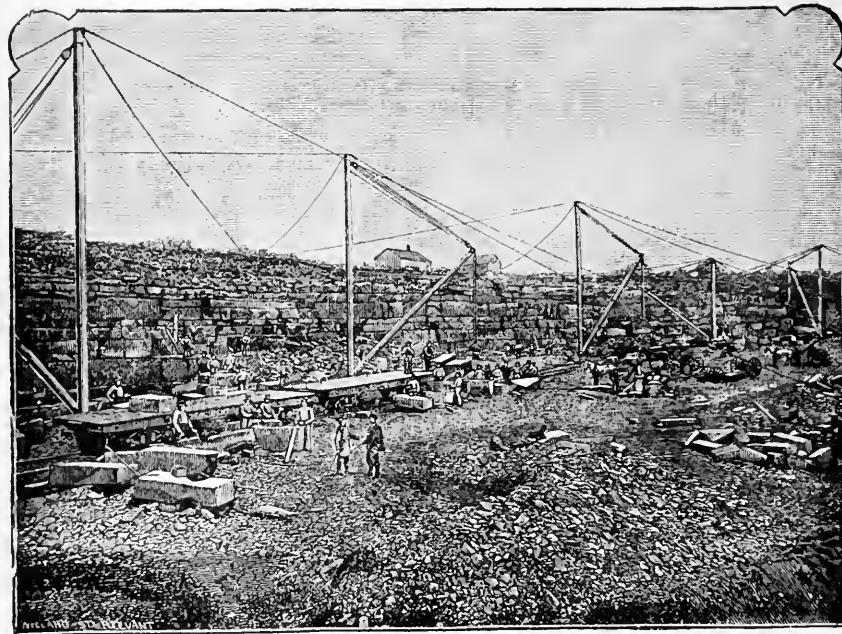
The Chandler Writing to The Duluth Daily News under date of
Mine. Ely, Minn., October 1, 1888,

a special correspondent says:

"Prior to the summer of 1887, all the marketable ore produced on this range was mined at the Minnesota Iron company's mines which are located at Tower. But during the summer of 1887 rich deposits were uncovered at a distance of twenty-six miles east of Tower. And the winter and spring of 1888 witnessed the active mining and shipment from this latter region of an

prove uninteresting. This shaft is sunk ninety-three feet and is covered by a shaft house rising seventy feet above the ground. Upon stepping off the cage or skip at the bottom of the shaft one finds himself surrounded by solid walls of ore. Gangways, high, dry and well aired, lead in all directions, and on all sides can be heard the chink, chink of the miner's pick; for here, unlike the formation at Tower, the ore is soft and, like gravel, is easily displaced without explosives.

"The method of mining here is unique.



QUARRYING ON ST. LOUIS RIVER.

ore equal, and, in some features, superior, to that produced at Tower.

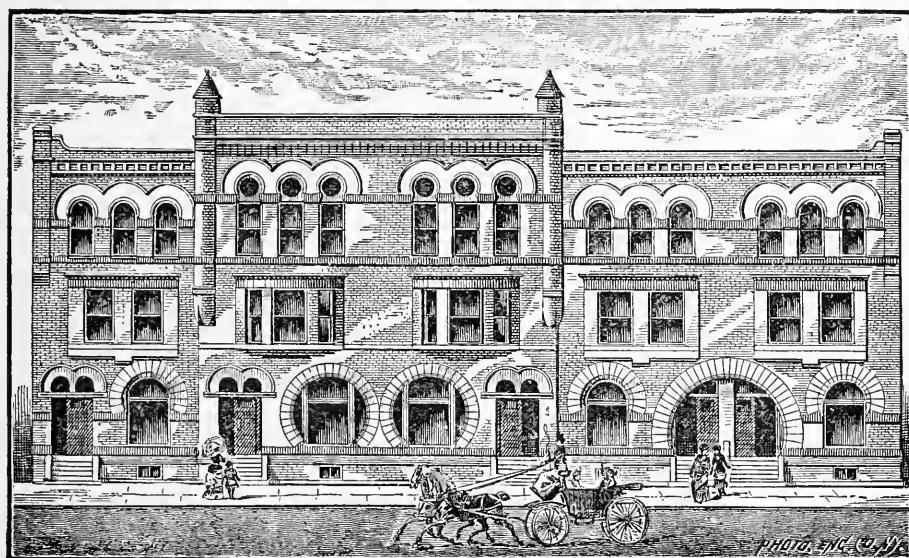
"Many people, through lack of information, erroneously believe that the mines at Tower constitute the entire Vermilion Iron range, but a visit to and through the wonderful country east of Tower will at once dispel so limited and wrong an impression. East of Tower, the Chandler mine was the first to compel attention, and its vein has been the first one stripped and worked. A short description of this mine can hardly

To make my descriptions intelligible, I will be obliged to go back and notice from the surface the large ore pit which lies just north of the shaft house, occupying from six to ten acres of ground and varying in depth from ten to sixty feet. In this pit are many men busily engaged in picking loose and shoveling the ore into numerous dark looking openings in the bottom of the pit. Now returning to the mine by way of the shaft, one will notice in traversing the various drifts and cross-cuts, the mouths of

wooden chutes protruding from the side walls. It is into these chutes from above that the miners are shoveling the ore from the bottom of the ore pit. Pull the slide at the end of the chute and the ears are instantly filled. Then they are pushed to the bottom of the shaft, elevated to the top of the shaft house and run out and dumped, either in the railroad cars standing beneath or, further over, on the stock pile. By using the method of the chutes one can readily see the time and labor saved in the handling of the ore. And whenever the body of ore to the depth of the shaft (ninety-three feet) is all removed and exhausted

quantity of ore in view at 500,000 tons—and active mining was commenced but one year ago. The company at present mines 1,000 tons daily, each ton of which averages 66 per cent metallic iron. Twenty thousand tons lie on the stock piles, while, through lack of cars, but 700 tons per day can be shipped.

More Valuable Deposits. On the east of Ely for miles the range extends in its wealth, and but a short time is necessary to convince the world of its greatness. Other towns may, and no doubt will, arise and accommodate the needs of man in the prosecution of the



THE BUCKINGHAM.

the simple sinking of the shaft to a greater depth will renew the ore possible to be mined by the same method.

“Some idea of the extent of this great deposit can be gained by the following description of its already known bounds. In length it extends 1,300 feet on the extra 40-acre location of the mine. In the east pit a depth of 110 feet has been attained, and in shaft No. 1 a test cross-cut has already been made, beginning from the south wall of the vein and running north 157 feet. And the north wall is yet to be reached. Competent authorities place the

mining of this vast hidden treasure, but Ely is and must remain a mining center until numberless tons are mined and shipped and the wealth therefrom accruing be distributed among its fortunate owners and inhabitants.

“To show the future possibilities of this region let me enter a moment into historical detail. Eight years ago the ore deposits at Tower were undisturbed. Yet the summer of 1887 saw 400,000 tons of ore of wonderful purity taken from them and shipped into a ready market, and the work of the present summer will produce even a greater result.

Three years ago the Chandler mine and the town of Ely were not yet dreamed of. Yet today 700 people live at Ely, and ere the present season's end 50,000 tons of rich ore will have gone into the iron marts of the world from this same Chandler mine.

"Sixty miles of the range yet exists practically undisturbed, and who shall say that the next two, five, ten or twenty years will not see this great territory dotted thickly with towns and busy with men, delving in the old earth after her iron treasures.

"Capital need not hang back, fearing that the richness of the earth is not here. The Vermilion iron range is yet untouched and magnificent returns will follow judicious and intelligent investment as surely as daylight follows sunrise. Its wealth is unsuspected and its resources are but faintly discerned."

Future Development. The year 1889 promises wonderful development of the mineral resources of the Vermilion. The Zenith and Pioneer mines, the McComber, the Bessemer and Long Lake mines, the Geggie property, the Fall Lake company's property, the Hartmann & Mallet properties, the Sheridan mine, the Vermilion & Grand Marais company's properties, and other excellent holdings, promise to contribute of their wealth to the markets of the world. Added to this, it may be stated that arrangements are making for the operation at an early day of the large and valuable tract now owned by the

Consolidated Vermilion Iron and Land company. Several strong and enterprising companies have been organized for active operation, while several organized a year or more ago expect to send ore to market before the close of the coming season. The outlook for the Vermilion range was never so bright as at this time.

The Gogebic Range. The history of the Gogebic range, lying within easy reach of Duluth by rail and water, is full of romantic interest. Discovered through the overturning of great trees by a fearful cyclone, the mines of that range were developed with extraordinary rapidity. In 1887, 1,091,335 tons of ore were shipped from these mines. These ores, like those of the Vermilion range, are red hematite, but totally unlike in appearance and physical features. The Vermilion ores are hard and dense; the Gogebic ores soft and clay-like. The Gogebic ores have more manganese and less phosphorous on the average than those of the Vermilion, although both are well within the "Bessemer limit," but the Vermilion ores are richer in iron, being worth in round numbers one dollar per ton more than those of the Gogebic. In the language of a noted expert: "There is no part of the country now developed where as great a quantity of iron ores, rich in metal and within the 'Bessemer limit' of phosphorous, can be obtained as within a radius of 120 miles of Duluth."

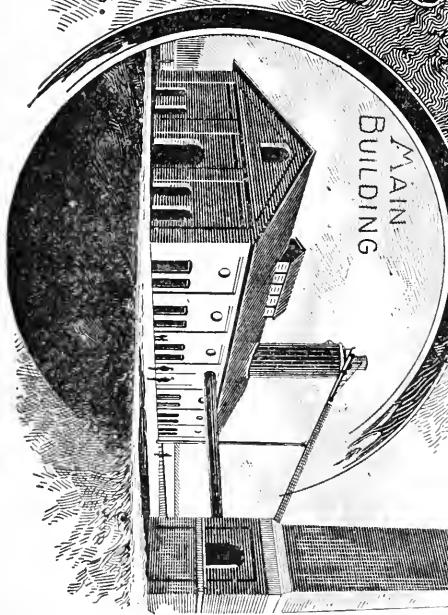


DULUTH
IRON
AND
STEEL
WORKS

GENERAL VIEW

for Inclined Plane
Transferring Ores.

MAIN
BUILDING





Duluth's Manufactures.

BY MANY the year 1888 is looked upon as having been a dull one and void of any special interest. In the elements that make for greatness; along the lines upon which permanent institutions are reared, and which mark the way of Duluth's destiny, greater achievements, more enduring results, have been accomplished in the twelve months just closed than in any previous year in the city's history. "Still waters run deep." Results cannot always be measured by the amount of noise made in their achievement. It is only as we glance back upon the year and note the work that has been done, that its magnitude appears.

In the line of manufactures it seems quite incredible that a young city, just reaching out for industrial institutions should in so short a time secure such important establishments as the Duluth Iron & Steel Works, the Minnesota Car Works, and the Imperial Flouring Mill. Each of these institutions is of its kind a model; each is of great capacity. All are being pushed forward to a working condition as fast as money and labor can do it.

The Duluth Iron & Steel Company. The Duluth Iron & Steel Company was incorporated April 7, 1888, with an authorized capital stock of \$1,000,000. R. S. Munger was elected president, J. R. Myers vice president, and W. H. H. Stowell, who for six years represented Virginia in congress, was chosen secretary and made general manager and superintendent of construction. The company was organized for business, and dedicated to at once put in a blast furnace plant for making pig iron, 16 foot bosh by 75 feet, with a capacity of from 125 to 150 tons per day. The invaluable services of John Birkinbine, the celebrated mineralogist, were brought into requisition, plans were formulated, and as soon as materials

could be secured work was begun. Something of the size and solidity of the foundations of the furnaces and buildings may be gleaned from the fact that 50,000 cubic feet of stone already have been used in their construction. Many delays were experienced in getting materials at the commencement, which hindered the progress of the work, yet much has been accomplished, and by July 1, 1889, the works will be ready for business.

The main building, or casting house, is 135 feet long and 65 feet in width. Its walls are of solid masonry and are 22 feet high. The roof is of corrugated iron supported by heavy iron trusses. From the floor of the casting house to the apex of the roof is 39 feet. At the east end of the building is the furnace stack, resting on a stone foundation 31 feet in diameter and 12 feet deep, and in its construction 6,000 cubic feet of stone were used. The stack is 75 feet high, resting on eight iron columns. It will be lined with fire brick, which will be held in place by a huge iron shell. These iron columns, weighing 60 tons, were cast by McLean & Crawford at their works in Duluth, and the iron shell weighing something more than 60 tons, was made by McGregor & Co. of this city. In this furnace the ore will be reduced to pig iron and run into beds at the west end of the building.

The draft stack is located next back of the casting house on the south. This stack is 135 feet high, 15 feet square at its base, and lined with fire brick. The inside opening is 7 feet.

In line with the draft stack are three batteries of boilers containing four 40-foot boilers each, or twelve boilers in all. Back of the boiler house is the engine house, 45x80 feet. It will contain the blowing engine, pumps, hoisting machinery, electric light plant, etc. The boilers will be

The
J. B. Adams Co.

In December, 1888, the J. B. Adams company, of Cheboygan, Mich., sent representatives to Duluth to look the field over with a view to removing their extensive wood-working establishment to this city. A careful investigation decided the company to at once make a permanent location here. A tract of land lying across the track from the West Duluth passenger depot was purchased and work at once commenced on large buildings and sheds. The company has a capital stock of \$50,000 and its members are J. B. Adams, formerly of Cheboygan, Mich., where he has had ten years' experience in his own large works; Russell M. Bennett of Minneapolis, and C. C. Prindle, general manager of the Wells-Stone Mercantile company of this city. The company will employ at the start between seventy-five and one hundred men. It expects to be in full operation by April 1, and will at once commence the manufacture of sash, doors and blinds, and will make a specialty of hardwood interior finish for private and public buildings and dwellings. Refuse pieces of lumber will be made up into box shooks. The main building, which is being rapidly constructed, is 60x150 feet, three stories high. Large dry-kilns, lumber sheds and warehouses for manufactured goods are also being erected, and the plant will be one of great completeness and large capacity. Its facilities for the easy handling of lumber and the finished product could hardly be better. Side-tracks from the main line of the St. Paul & Duluth railroad run to the doors and furnishes easy access both to the local yards and markets and to distant points. The Adams company gives promise of becoming a very successful institution.

Miscellaneous. Thus hastily have the four great enterprises added to the fast-lengthening list of Duluth's enterprises been sketched. This paper would not be complete without a slight mention of those which have grown with Duluth's

growth and strengthened with her strength. However, The News Annual can in this issue give but a summary of them, and this will be found in the list below, which, in its importance as a contribution to the history of the year, is second to no other feature. These figures show that Duluth has produced in one line or another, goods and articles to the value of \$4,265,000. What will Duluth do in 1889, with her ear works, her iron and steel works, her flouring mill, her wood-working establishment, all of which are fast getting in shape for business?

Class of Manufacturing.	No. of Concerns.	No. of Employees.	Value of Product.
Bakers.....	11	29	\$16,600
Blacksmiths.....	15	19	23,100
Boat and shipbuilders.....	3	51	*65,000
Boilermakers.....	3	14	35,000
Blank books.....	4	11	....
Boot makers.....	8	12	*26,000
Brewers.....	1	18	90,000
Brick and tile makers.....	2	43	125,000
Broom makers.....	1	5	17,000
Butchers, (sausage and lard).....	29	58	76,700
Carpet weavers.....	2	3	*3,200
Cigar makers.....	4	23	95,000
Confectioners.....	7	9	*12,000
Cornice builders, roofers, etc.....	4	21	140,000
Dairymen.....	21	26	*105,900
Electric light companies.....	2	14	*22,700
Florists.....	4	7	6,000
Flour mills, in operation one month.....	1	14	....
Furniture makers and upholsterers.....	8	17	21,800
Gas companies.....	1	..	*450,000
Harnessmakers.....	7	9	22,500
Jewelers.....	3	3	*5,100
Lumber manufacturers.....	6	210	1,487,00
Machinists.....	4	95	360,000
Marble cutters.....	2	12	36,000
Newspapers, 3 daily, 7 weekly, 2 monthly.....	12	..	....
Pork and beef packers.....	2	35	200,000
Photographers.....	9	17	21,500
Plaing mills, including sash, doors and blinds.....	5	130	325,000
Plumbers.....	5	65	280,000
Rubber stamps.....	1	2	2,500
Shirt makers, established part of year.....	1	8	10,000
Soda water, including mineral waters.....	2	5	7,000
Tanneries, including shoe uppers.....	1	12	65,000
Taxidermists.....	2	2	1,800
Tents and awnings.....	2	6	7,000
Trunk makers.....	1	3	5,000
Wagon builders.....	6	44	58,000
Totals.....	202	1,052	\$4,265,000

*The star indicates local demand.

The
Minnesota
Car Company's
Works.

Foundry

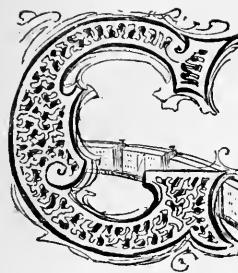
End of Rolling Mill

Paint Shop.

End of Car Shop.



Duluth's Railway System.



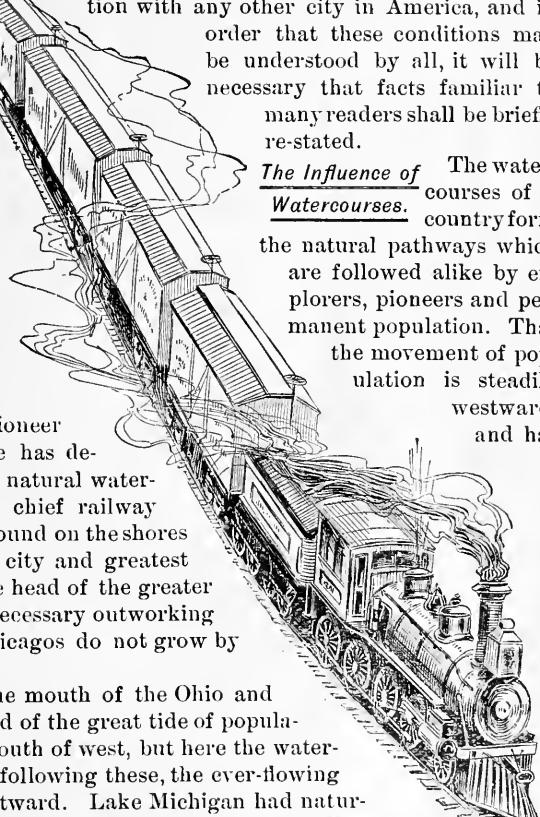
been from the earliest times, is a fact familiar to every student of history. Following naturally from the two facts above mentioned, we find that the earliest settlements in the interior of the United States were located along the southerly shores of the great lakes and the banks of the Ohio river, and that the comparatively narrow strip of territory lying between these two great waterways, and extending in a general east and west direction, is the most densely populated portion of the country.

Neither the departure of the pioneer nor the coming of the locomotive has detracted from the importance of the natural waterways, for the principal cities and chief railway centers of the territory named are found on the shores of lake and river, and the largest city and greatest railway center of all is found at the head of the greater waterway. These results are the necessary outworking of unchangeable natural laws. Chicago does not grow by chance.

From the eastern seaboard to the mouth of the Ohio and the head of Lake Michigan the trend of the great tide of population was necessarily considerably south of west, but here the watercourses change direction, and, still following these, the ever-flowing tide of settlement turned northwestward. Lake Michigan had naturally an advantage over Lake Superior in that the rapids of the St. Mary's river were impassable until the canal and locks at Sault Ste. Marie were built in 1855. Hence a prosperous city had grown up at the head of Lake Michigan

REAT as are the strides which Duluth is making in other directions, no other feature of development can be compared, either in extent or importance, to the railway movements now in progress which have this city for their focal point. It is doubtful if any city, whatever its size, certainly no city of 40,000 people, was ever able to look backward over a twelve-month of more gratifying railway progress than Duluth can show for 1888, or forward to a year of greater promise than is foreshadowed for 1889. The conditions attending the railway development of Duluth differ materially from those which have arisen in connection with any other city in America, and in order that these conditions may be understood by all, it will be necessary that facts familiar to many readers shall be briefly re-stated.

The Influence of Watercourses. The watercourses of a country form the natural pathways which are followed alike by explorers, pioneers and permanent population. That the movement of population is steadily westward, and has



while the pine forests around the head of Lake Superior were still unbroken, and, largely for the same reason, the Mississippi river became the highway to and from the Northwest and the trade center for the Northwest was established at St. Paul, at the head of navigation on that river, instead of at Duluth.

Railways

— 18 —

—
Waterwauſe.

Railways
vs.
Waterways.

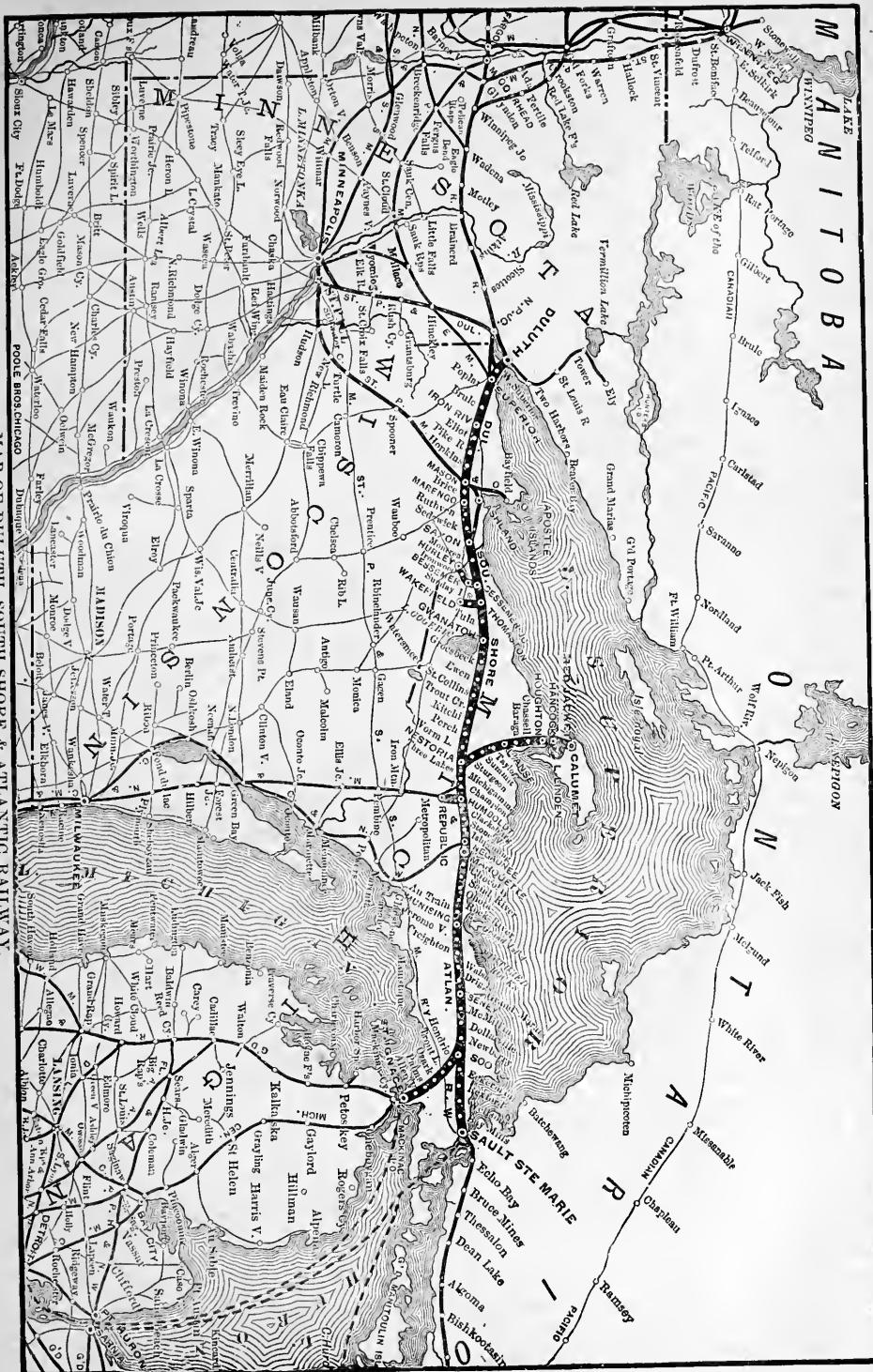
As population pushed back from the natural waterways, artificial means of communication became a necessity. Railroads being as yet unknown at the beginning of the present century, the people turned their attention to the construction of artificial waterways, something like a craze for canal building being developed by the opening of DeWitt Clinton's masterwork—the Erie canal—in 1825. During the first third of the century the waterways, natural and artificial, had the field practically to themselves, as the railway system of the country could not boast a total of 1,000 miles until 1835. But from this time on the railways gained steadily on the canals, and by the beginning of the second half of the century they were undeniably in the lead. In 1849 over 1,000 miles of new track were laid, and new construction has never fallen below that amount during any year since that date, with exception of three years during the war. The craze for canal building was succeeded by a mania for railway building, new construction, which was 1,369 miles in 1849, rising to 3,642 in 1856, to 7,379 in 1871, to 11,568 in 1882 and to the astounding figure of 13,080 miles in 1887. These figures,

which are taken from Poor's Manual, indicate, of course, the highwater marks of railway construction, and a more just basis of comparison may be found by taking the average annual increase during successive periods of ten years, and, as the following figures will show, with results no less interesting than before. For the decade from 1849 to 1859 the new mileage added averaged 2,100 miles per year. The war interfered with railway building as with everything else, and the next ten years, from 1859 to 1869, showed an annual average increase of but 1,500 miles. For the next decade, however, from 1869 to 1879, the average rose to 3,950, while for the decade just closed, 1879 to 1889, the annual



THE ST. PAUL & DULUTH, DULUTH & IRON RANGE, AND DULUTH & WINNIPEG
RAILROADS

average addition to the railway mileage of the country was no less than 7,640 miles, a figure and a fact even more astounding than the addition of over 13,000 miles in a single year.



*The Mistake
of the
Railways.*

As railways are dependent on population for support, the great wave of railway construction which rolled across the country, followed exactly in the course of the wave of population which preceded it. The centers of population which had been fixed upon the waterways before the days of railroads, became the centers from which and to which railways were built, because in them was concentrated both the capital needed for their construction and the business necessary for their profitable operation. So Chicago became, naturally and properly, the great railway center of the west, and railways built by Chicago capital and controlled by Chicago men, followed the movement of population west and southwest to the Missouri and northwest to the head of navigation on the Mississippi. The success of the railway in its competition with the canal, and even with the ever-shallowing rivers, gave railway managers the idea that it was but a question of time when the steamships of the great lakes would be forced to follow the canal boat and river steamer into permanent retirement, leaving the railway to monopolize the transportation of the continent. Acting on this mistaken idea, and leaving deep water transportation out of account, the managers of the Chicago railway systems have pushed their lines into thousands of square miles of territory which is nearer to the head of Lake Superior than to the head of Lake Michigan, so that for years past Chicago has controlled the transportation, and levied tribute on the trade, of a territory which belongs to Duluth.

With the growth of St. Paul and Minneapolis, a distinctively northwestern railway system was developed, controlled by residents of the Twin Cities and operated in their interests. These roads followed the drift of population and ran west and northwest of St. Paul and Minneapolis. But the northwestern railway men reasoned from the same mistaken premises as those of Chicago, to conclusions still more widely wrong. For while the Chicago lines were pushed too far, they started from a natural terminal point; but northwestern railway men attempted to prevent the development

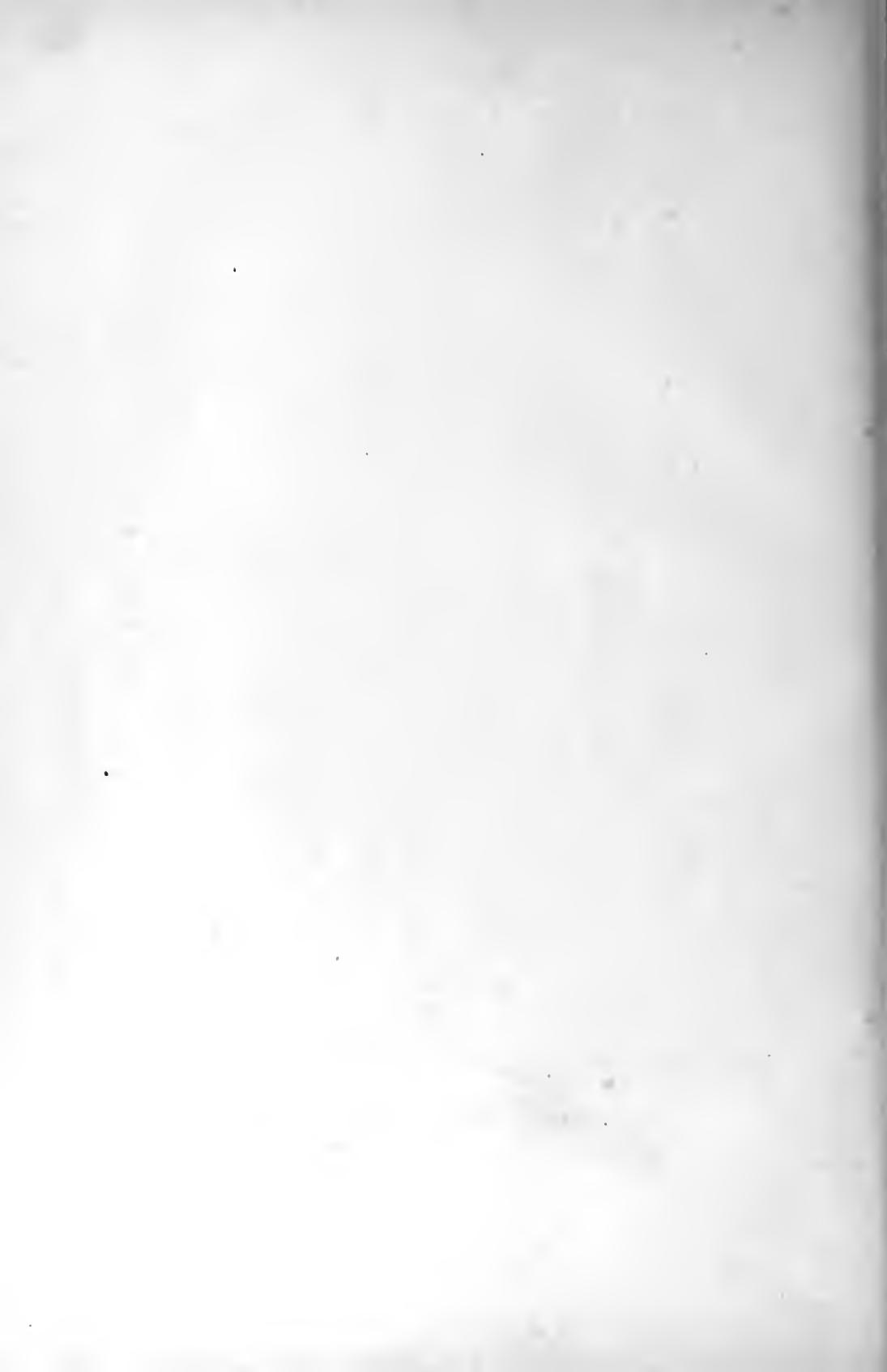
of the natural terminal point at the head of Lake Superior, by the creation of an artificial terminal point at St. Paul, less than 150 miles away, blindly ignoring the fact that they were tributary to Chicago, another natural terminal point, over 400 miles away. Even the Northern Pacific, planned for the very purpose of connecting the waters of Lake Superior and Puget Sound, when reorganized after the crash of 1873, was so far diverted from its original intention, that the branch from Brainerd to St. Paul was considered the main line and operated as such—as it still is—thus becoming the connecting link between the navigable waters of Puget Sound and the St. Paul ends of half a dozen Chicago roads.

The great tide of population, ever widening as it rolled westward, swept onward from the Atlantic seaboard to the head of Lake Michigan, to the falls of St. Anthony and on to the plains beyond, while Duluth lay sleeping, waiting for the fullness of time to come. The railways followed the population, and thus it came about that St. Paul was made tributary to Chicago and Duluth to both of them, while a great region, properly tributary to this city, has been developed by railways which for a time succeeded in forcing the currents of trade into unnatural channels.

*The Turning
of the Tide.* Having given, in order that the situation might be fully understood, what some envious critic will be sure to call a record of failures, it is now in order to turn to the pleasanter task of stating the successes gained. The first railroad to Duluth came from St. Paul and arrived in 1870. The Northern Pacific started westward the same year, but it was fifteen years before it was possible to go by rail from Duluth to Chicago or the East without passing through St. Paul. The completion of the Chicago, St. Paul, Minneapolis & Omaha road in 1885 placed Duluth on an independent footing so far as St. Paul was concerned, but 1888 will always be memorable in the railway history of this city because in that year Duluth was given complete commercial independence by the completion of the Duluth, South Shore & Atlantic railway.



THE NEW CHAMBER OF COMMERCE BUILDING.



Duluth, South Shore & Atlantic. In a series of articles which appeared in the Century magazine a few years ago, discussing the probable location of the ultimate metropolis of America, the writer who presented the claims of Chicago stated that the position of that city could not be flanked, and that all the business of the great and growing Northwest, would, for all time to come, be forced to the south of Lake Michigan during that portion of every year when navigation is suspended on the great lakes. But a look at the map on page 57 will show that Chicago's position has been flanked most effectually, and that the currents of trade to and from the Northwest are no longer under the necessity of flowing through the city at the head of Lake Michigan, either in winter or summer. A new trunk line has been established, running eastward almost in an air line from Duluth to twin termini at Sault Ste. Marie, at the foot of Lake Superior, and St. Ignace on the Straits of Mackinac. At Sault Ste. Marie a magnificent bridge gives connection with the Canadian Pacific railway, and at St. Ignace the most powerful ferry boat in the world, the unique construction of which enables it to pass easily through ice three feet thick, maintains connection with the Grand Rapids & Indiana and the Michigan Central railways. As compared with the route via Chicago, the Duluth, South Shore & Atlantic effects a saving of seventy-six miles in the distance from Duluth to New York, of 150 miles to Boston, and of about 200 to Portland Me., while the distance by rail from Duluth to tide-water at Montreal is but a trifle farther than the distance from Chicago to New York.

The completion of this road is so recent that only the beginnings of the benefits it will bring are manifest as yet. One result of prime importance, however, was immediately obtained, viz: the reduction of all rail freight rates to and from the east to the same figure enjoyed by St. Paul. This is a great step in advance, which was impossible so long as the only all rail route lay through Chicago, but it is not a finality. During the season of navigation Duluth has rates on freight received or forwarded

by lake which are always as low, and generally considerably lower than those which are in effect at Chicago. It may not come this year or next, but the final outcome of the situation will be the placing of Duluth on a complete equality with Chicago in the matter of freight rates—both winter and summer—by rail as well as by lake. However, the present reduction has placed Duluth jobbers in a position far in advance of any they have heretofore occupied, and opened eastern markets to Duluth lumbermen. The road traverses the entire length of the Gogebic and Marquette iron ranges, and penetrates the heart of the Keeweenaw copper country, all of which are nearer to Duluth than to any other trade center and will be brought into close business relations with this city. The road has a total of 529 miles of track, in which is included the roads formerly known as the Detroit, Marquette & Mackinac and Marquette, Houghton & Ontonagon, and of which about forty-five miles were built during 1888. The South Shore at present uses the terminal facilities of the Northern Pacific, coming into the city over the tracks of the latter road from Iron river, some thirty-five miles east of Duluth. But this road, which is controlled by capitalists connected with the Canadian Pacific, has an interest, along with the Eastern Minnesota, in the Duluth Terminal railway, which it will use when completed. The distance from Duluth to the Sault is 409 miles, to St. Ignace 413.

A Change of Front. The United States is a country of great railway systems. Within its wide extended bounds may be found, not merely two or three, but more than a score of such systems, each having thousands of miles of road and controlling the carrying trade of a territory greater in area than most of the states of Europe. But when such a system, built up through years of effort with a certain city as its central terminal point, executes a grand change of front and makes of another city its main objective point and the center from which its further development proceeds, such a change can properly be called phenomenal. Yet just such a change has taken place in the case of the Manitoba road, as the St. Paul, Minneapolis & Manitoba railway is called for short.

St. Paul, This road is an outgrowth
Minneapolis of the old St. Paul & Pacific,
& Manitoba. which completed its first nine miles of track, from St. Paul to St. Anthony in 1863. It went on up the Mississippi to Elk river in 1864, westward to Lake Minnetonka in 1865, and a few years later into bankruptcy. Reorganized under the title by which it is

Pacific was planned as a St. Paul road, and after its reorganization as the St. Paul, Minneapolis & Manitoba, its development was continued for some years solely with reference to St. Paul as its center and main terminal point. But President Hill, whose ability is sufficiently evidenced by the success of the road under his management, is a man quick to see all the facts

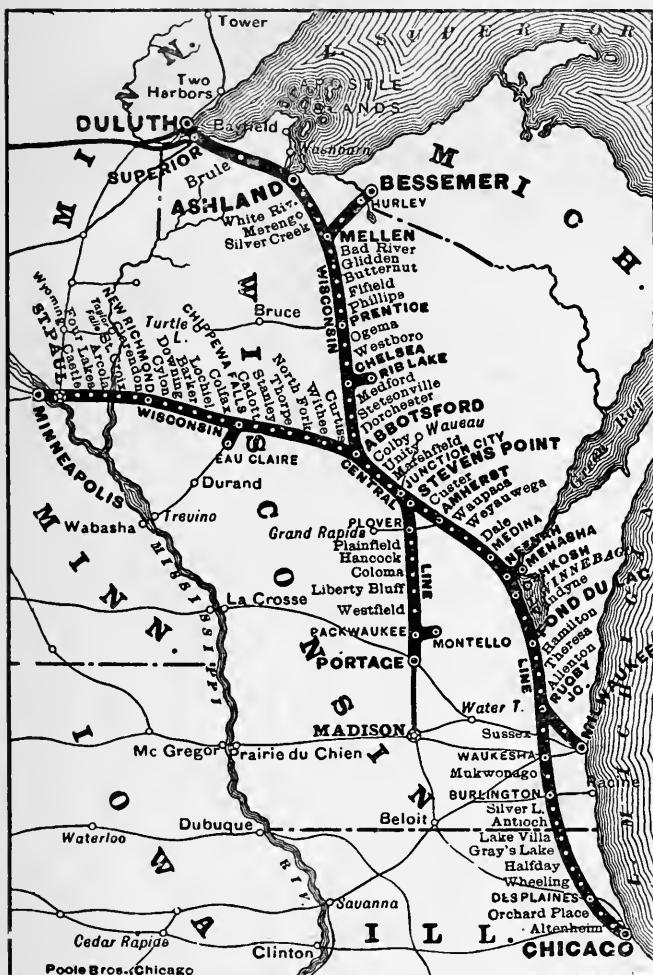
which have a bearing on the subject under consideration, ready to look the facts squarely in the face, able to reason from the facts to correct conclusions and prompt to formulate plans in accordance with those conclusions and carry them steadily forward by swift methods, to sure results.

Interesting Discoveries. In his study of the situation he found:

First—That after his road had gathered up the traffic along its thousands of miles of track and brought it to St. Paul, it was largely at the mercy of the roads running from St. Paul to Chicago.

Second—That some of the Chicago roads had already built beyond St. Paul into the territory occupied by his road, and that there was every probability that the rest of them would do the same thing. Hence the Manitoba would presently be compelled, either to protect its traffic by building its own line to Chicago, or be placed

in the intolerable position of competing for traffic at original points, with the same roads to which it must turn over at St. Paul such traffic as it secured in this competition. In short, President Hill had discovered that St. Paul is not a natural ter-



MAP OF THE WISCONSIN CENTRAL RAILWAY.

now known, it had grown in 1884 under the guidance of the same master hand which still controls its affairs, to a road having more than 1,000 miles of track, which has been increased to over 3,000 miles at the close of 1888. The St. Paul &

inal point, and that Chicago is. But his studies did not stop at this point, nor did his discoveries, either. Chicago could not be a natural terminal point simply because so many railroads end there. If that were all that is needed, the railways could create a terminal point wherever they chose—at St. Paul, for instance. But the railroads built past St. Paul without serious consequences, while the Wabash, which attempted to run around Chicago, ran plump into the hands of a receiver—and has stayed there ever since. It must be that the railroads end in Chicago because that is a natural terminal point? Studying this question farther he found—

Third—That whatever may be true regarding canals and shallow rivers, railways do not and cannot compete with deep-water transportation, hence—

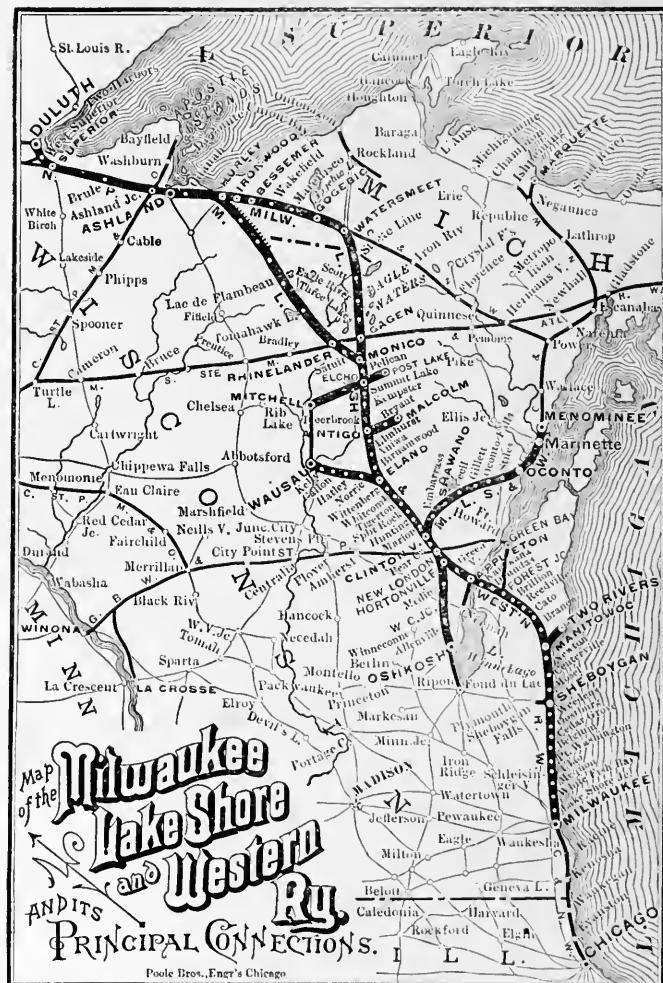
Fourth—A natural terminal point is one situated at the inland terminus of deep-water navigation, to which point, also, the railways will naturally and necessarily come.

Fifth — Since deep-water navigation is the controlling factor in transportation, the trade of a given territory, other things being equal, belongs to the natural terminal point which is nearest. Is there such a natural terminal point nearer than Chicago?

Duluth, at the head of Lake Superior, is a natural terminal point, inferior to Chicago in nothing, and having at least two strong points of superiority, viz: a position nearly 500 miles farther inland, although the distance by water to Buffalo or Montreal is the same, and a

harbor so much more commodious and convenient that no comparison is possible. A few minutes work on a map with a pair of compasses and a straight edge, and the line shown on page 7 is found, showing clearly that—

Sixth—Duluth is the nearest natural terminal point for a territory vastly larger than that which belongs to Chicago, and



Duluth, therefore, is bound to become the trade center, and hence the railway center, for all this territory. This territory tributary to Duluth not only includes all the lines of the Manitoba road, but thousands of miles of road belonging to Chicago sys-



THE DULUTH NATIONAL BANK BUILDING.



tems. It was inevitable that some one, sooner or later, would realize the full importance of the group of facts symbolized by Banning's line and begin the building of a Duluth system of roads which would have not only the Manitoba, but all those portions of the Chicago roads lying north and west of Banning's line, completely at its mercy. Here was a danger to the Manitoba far greater than the ever increasing encroachments of the Chicago roads on its territory and traffic. But the harm was not yet done. Could it be prevented, and if so, how? To that question there was but one answer, and it did not take President Hill long to decide that—

Eighth—The solution of the problem was for the Manitoba to build to the head of Lake Superior, and make Duluth, instead of St. Paul, the center for the future development of the system—and that is what was done, the change of front, which has been going gradually but steadily forward for five years past, being completed in 1888. First a line was built from St. Cloud to Hinckley, on the St. Paul & Duluth, and a traffic arrangement made with the latter road over which the business to and from Duluth has been carried until January 1, 1889. Meanwhile extensions were pushed in various directions, but all radiating from Duluth instead of from St. Paul. Look at the map on page 62 and notice the lines terminating at Sioux Falls, Huron, Aberdeen and Ellendale, Dak., and the great line reaching out like a mighty arm across Dakota and into the heart of the mining regions of Montana. All point directly toward Duluth. But until a few months ago the actual connecting link was not built. This has been supplied during 1888, by the building of a line from Hinckley to Duluth which is essentially a Manitoba line, although a separate corporate existence is maintained under the name of the Eastern Minnesota railway, of which Henry Minot is president.

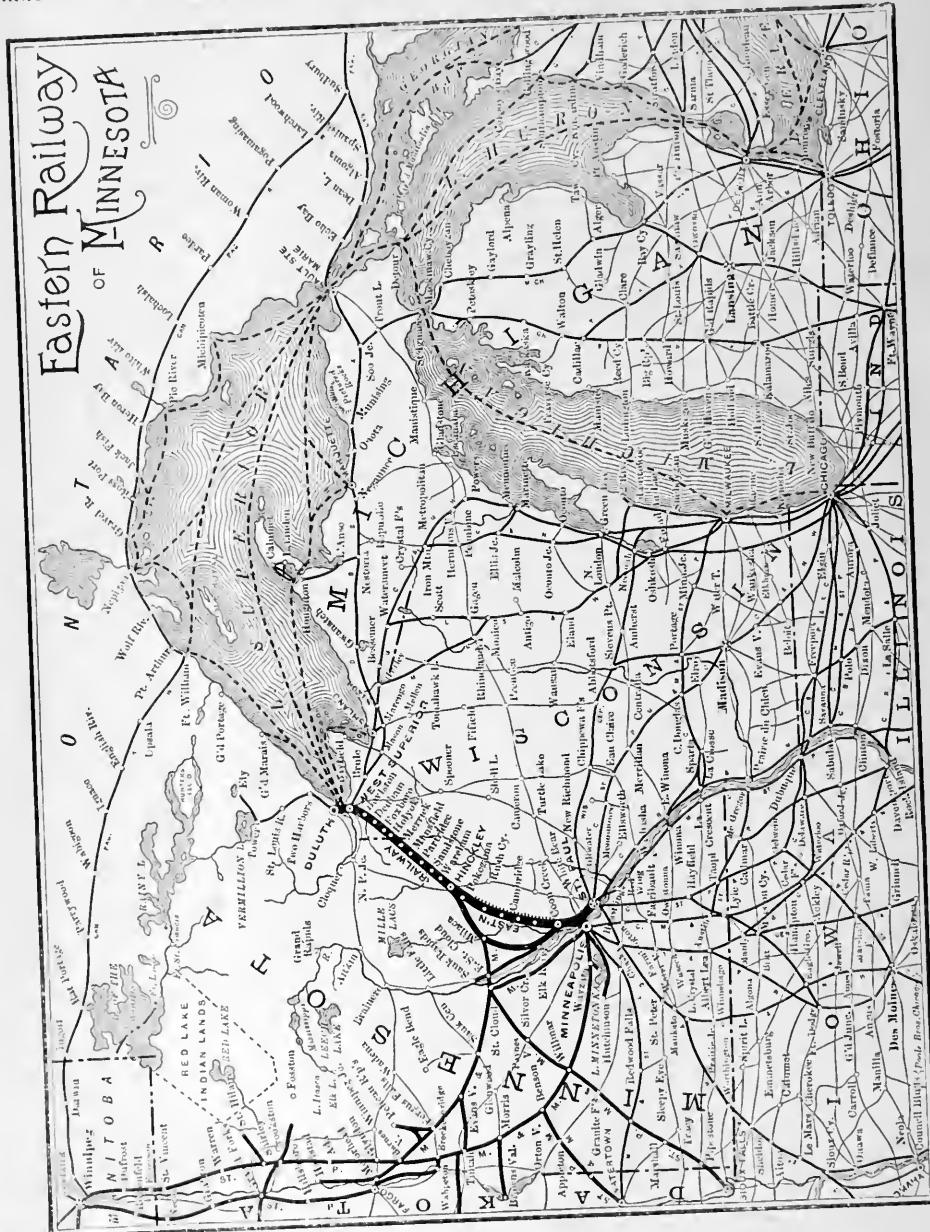
The Eastern The Eastern Minnesota has at present 68.3 miles of main track, extending from Hinckley, Minn., at the crossing of the St. Paul & Duluth, to West Superior, Wis. The Eastern Minnesota will enter Duluth over the track of the Duluth Terminal rail-

way, in which the Eastern has a large interest. Pending the completion of this line, work on which is being vigorously pushed, the Duluth business of the Eastern Minnesota is being handled at the warehouses of the Northern Pacific road. The first division has been built in the best manner, having maximum grades of twenty-one feet to the mile, and maximum curves of three degrees. Considering the rough country traversed and the height of land surmounted, this is remarkably good engineering. The rails used are steel of the Pennsylvania standard, seventy-five pounds to the yard. The Eastern Minnesota has trackage rights over the Manitoba so that it runs its own trains to St. Paul and Minneapolis, going at present via Milaca and Elk river. An independent line has been surveyed from Hinckley to Coon creek, near Minneapolis, which is to be built early in 1889, and which, when done, will give a line fourteen miles shorter from Duluth to Minneapolis than the shortest existing line, and three miles shorter to St. Paul. The Eastern already has large terminal grounds in West Superior—which is destined to sustain the same relation to Duluth that Jersey City does to New York—and has begun condemnation proceedings to acquire a large amount of valuable property in the center of Duluth. This property extends from Sixth avenue west to Twelfth avenue west, between Michigan and Railroad streets. This property is to be developed with reference to the Michigan street level, access being secured by the elevated track now being constructed over the Terminal company's right of way, from the Northern Pacific bridge, at the foot of Rice's Point, to Sixth avenue west. This avoids the plunge of twenty feet down to the level of the other roads and the delays and complications inseparable from the numerous grade crossings which would otherwise be necessary. Through passenger service will be begun in the spring.

The Northern It was a realization of the fact that deep-water navigation is the controlling factor in transportation which led to the change of front of the Manitoba system, and the same consideration has caused the

Manitoba to still further strengthen its position by the establishment of the Northern Steamship line. Contracts have been made for the building of a fleet of large

ern Light, Northern King, North Wind and North Star, are already afloat, two more will be launched in the spring and six more are expected to follow. They are



steel steamships, each having a capacity for carrying 90,000 bushels of wheat or 2,700 tons of coal. Four of these, the North-

fitted with triple expansion engines of the latest marine pattern and can make the trip from Duluth to Buffalo in three and

one half days. With the facilities for loading and unloading vessels which are a part of the dock and elevator equipment at each end of the route, these boats will make in an average season eighteen round trips, making for the six boats which will be in commission next year, a total capacity for the season of nearly 10,000,000 bushels of wheat and 300,000 tons of coal.

The Meaning of the Change. In the beginning of this article it was shown how it came about that Duluth was for so long dependent on Chicago for railway facilities, and that the railway development of the Northwest was carried on with St. Paul as its center. The coming of the Duluth, South Shore & Atlantic road emancipated Duluth from the control of the Chicago railway systems, and at once put Duluth jobbers on an equality with those of St. Paul in the matter of all rail freight rates from the east. The coming of the Eastern Minnesota makes Duluth the traffic center of the great Manitoba system, with its nearly 3,300 miles of road—opens to Duluth, as by the motion of some mighty hand, the trade of a region greater in area than all New England—and places Duluth on an equality with St. Paul and Minneapolis in the competition for the trade of the Northwest, rates being the same from Duluth as from the Twin Cities to all points in Dakota and the vast western territory served by the Manitoba road.

Until the Manitoba extended its lines into central and southern Dakota, all the railways which entered that region belonged to Chicago systems and the people of that part of the territory were compelled to maintain trade relations with Chicago whether they would or no. But the Manitoba meets the Chicago roads at Aberdeen, Huron, Watertown and Sioux Falls, at an advantage of from 150 to 300 miles, an advantage in favor of Duluth which Chicago roads and Chicago jobbers will find it impossible to overcome. The coming of the Manitoba to Duluth means a mighty readjustment of the trade forces of the Northwest.

Forecasting the Future. The Manitoba's change of front has been called complete, and so it is, in a sense, since the building of the Eastern

Minnesota, but the use of the word complete is not intended to imply that the Manitoba is done building lines to Duluth. The route through Crookston and St. Cloud is much too roundabout for the Duluth business of the line to Great Falls and Helena. The same thing is true in only a slightly less degree of the proposed line (indicated on the map on page 67) from Crookston via Brainerd to Milaca. The distance from Leech lake to Duluth via Milaca is twice as great as it would be by a direct line. Such a line—also indicated on the map—has been surveyed, crossing the Northern Pacific at Kimberly, the St. Paul & Duluth at Moose lake, and joining the Eastern Minnesota near Holyoke. There are rumors of a new survey running farther north and closer to the Duluth & Winnipeg. Nearly fifty miles of track are already laid from Crookston southeast toward Leech lake, and it is probable that the rest of the line, as well as the line of the Eastern Minnesota from Hinckley to Coon creek will be built in 1889. Speaking without other authority than that given by a study of the map and a knowledge of the progressive character of the Manitoba road in the past, The News expects to see the Montana line extended to the Pacific coast, the Aberdeen line to the Black Hills, the Huron line to Salt Lake City and the Sioux Falls line to Denver, or at least to a connection with the Burlington or Union Pacific in Nebraska. A large program, perhaps, but it would not be half as presumptuous today to prophesy that it would all be accomplished in the next five years, as it would have been five years ago to foretell what has since been done.

Northern Pacific. It was money furnished by Jay Cooke that built the first Duluth road; it was also money furnished by Jay Cooke that started the second Duluth road on its westward march to Puget Sound, and 1870, the same year which saw the completion of the Lake Superior & Mississippi road, witnessed also the beginning of work on the great northern trans-continental line, the Northern Pacific railway. In 1883, under the presidency of Henry Villard, it was completed to a connection with the tracks of the Oregon Railway & Navigation com-

pany, and a through line to Portland was established, but it was not until July, 1887, that the Cascade division was finished, and the Northern Pacific began running trains from Duluth to Tacoma all the way over its own track. It is not the intention of this article to describe the territory covered by existing roads and the reader who is not already familiar with the course of the Northern Pacific is referred to the map on page 74. The most important development in its relations to Duluth which has occurred in connection with the Northern Pacific in 1888, has been the lease to that company of the Red River Valley road extending from Winnipeg to the international boundary, a distance of sixty-six miles. By the terms of the charter under which the Canadian Pacific road was built, no other road was to be allowed under twenty-five years, to build within fifteen miles of the international boundary in Manitoba or the Northwest territories, giving the Canadian Pacific a complete monopoly of the carrying trade of the Canadian Northwest. Roads could be built, indeed, north of the fifteen mile dead line, but they could have no other connection or outlet than the Canadian Pacific. It was out of the question to parallel that road, either westward across the Rocky mountains to the Pacific coast, or eastward across the wilderness of granite hills and bottomless muskegs north of Lake Superior. At one time it was seriously proposed to build from Winnipeg to Churchill Harbor on Hudson's bay. Strange as it may seem to one who hears the statement for the first time, Churchill Harbor is sixty-four miles nearer Liverpool than New York City is. But it is doubtful if the season of navigation through Hudson strait is long enough to make the enterprise successful or, at least, profitable. Besides, the distance from Winnipeg to Churchill Harbor is over 600 miles, while the Duluth & Manitoba branch of the Northern Pacific was already at the boundary, only sixty-six miles away waiting to give a Duluth connection to an independent railway, and thus furnish a competitive route for the business of Manitoba.

The constitution of Manitoba gave the province the right to charter railways within its limits, and the people of Mani-

toba contended that the rights and powers guaranteed by their constitution could not be taken away by the provisions of a charter granted at a subsequent date to any railway company whatsoever—not even the Canadian Pacific. A charter was given by the provincial legislature to the Red River Valley railway, to run up the west bank of the Red river from Winnipeg to the international boundary, and construction work was at once begun. The charter was disallowed by the Dominion parliament, but still the work went on, and the plucky people of the Prairie Province expressed their determination to continue the work, and complete it, too, even if they had to try conclusions on the field of battle with Dominion militia or British regulars. But the Dominion government rightly concluded that it would gain but little, either of credit or profit, from using the power of the British empire to crush a people who were fighting for their rights. Besides, it was not altogether certain that the appeal to the throne, which the province intended to take before resorting to the appeal to arms, would not result in sustaining the rights granted by the constitution. So the Dominion government abandoned its policy of disallowing Manitoba railway charters and purchased from the Canadian Pacific a surrender of the monopoly clause of its charter by the payment to that company of \$15,000,000. The Red River Valley road has been completed, the Northern Pacific is running regular daily trains to and from Winnipeg, and vessels, laden deep with cargoes consigned to Winnipeg, began again in 1888 to land at the Northern Pacific docks in Duluth, as they did before the Canadian Pacific was finished. Arrangements had been made, also, for Duluth elevators to handle Manitoba wheat, in bond, but the untimely frost of August last changed the fair promise of the finest and largest crop ever grown in the Northwest into a disaster involving Minnesota, Dakota and Manitoba alike. Fortunately the increased price of wheat compensated in a considerable degree for the shortage in the crop, but Manitoba, like Minnesota and Dakota, has very little wheat for export this season.

Having secured an acknowledgement of



Palladio Building
Henry Raeder Architect
Chicago - Duluth



its right to build railroads, Manitoba was not disposed to stop with the completion of the Red River Valley road. When the first cold snap came last fall, a large amount of grading had been done on a line called the Portage Link, from Winnipeg to Portage La Prairie, 68 miles west. This line runs on the south side of the Assiniboine river, paralleling the main line of the Canadian Pacific, which runs on the north side of that stream, and crossing the Pembina and Southwestern branches of that road. The Canadian Pacific opposed these crossings in every way, and a collision at one time seemed imminent between a small army of railway employes and a force of indignant citizens. Wiser councils prevailed, however, and the combined effect of the supposed approach of winter and an appeal to the supreme court at Ottawa caused a suspension of work. But the supreme court has decided in favor of the province, and as winter has so far failed to arrive, work has been resumed.

Another branch of the Red River Valley road is to be built northwest from Morris, forty-five miles south of Winnipeg, which is to be completed in 1890 to Brandon, 130 miles west of Winnipeg on the Canadian Pacific, and will be extended as may be found desirable in the future. Strictly speaking, the Red River Valley line, the Portage extension and the Brandon branch are not to be operated by the Northern Pacific, but by a company known as the Northern Pacific & Manitoba.

Manitoba & Northwestern. The Portage link will make a connection at Portage La Prairie with the Manitoba & Northwestern, an independent line hitherto dependent on the Canadian Pacific for an outlet. It has already some two hundred and forty miles of road, the main line extending 205 miles northwestward from Portage La Prairie. The portion of the road already built traverses a fertile farming country, which extends indefinitely to the west and northwest, the climate growing milder in those directions owing to the influence of the Japan current. Fine wheat is raised every year at Fort Frances, in Latitude 61 degrees north and Longitude 129 degrees west. The Manitoba & Northwestern has plenty of room to grow.

Wisconsin

Division.

The Eastern or Wisconsin division of the Northern Pacific extends to Ashland, Wis., but Duluth is the starting point for trains both east and west. The Wisconsin Central and Milwaukee, Lake Shore & Western railways connect with the Northern Pacific and gain an entrance to Duluth over its tracks, both lines running through sleepers between Duluth and Chicago. The Duluth, South Shore & Atlantic also, which runs twelve miles south of Ashland for topographical reasons, connects with the Northern Pacific at Iron River, running its trains into Duluth from that point over the tracks of the latter road. The Northern Pacific owns the great railroad bridge over St. Louis bay over which all its own trains from both east and west, and the trains of all roads which enter Duluth from the east, come into this city. The old line along the St. Louis river, jointly owned by the Northern Pacific and the St. Paul & Duluth, although still shown on the map, has been abandoned by both roads. Trains to and from the west use a portion of the Wisconsin division, which is reached over the Pokegama cut-off. The Northern Pacific also runs short-line trains between Duluth and Superior, and a new track was built in 1888 from the Rice's Point station to the bridge, which effects a considerable saving in distance and a still greater saving of time as compared with the route formerly used.

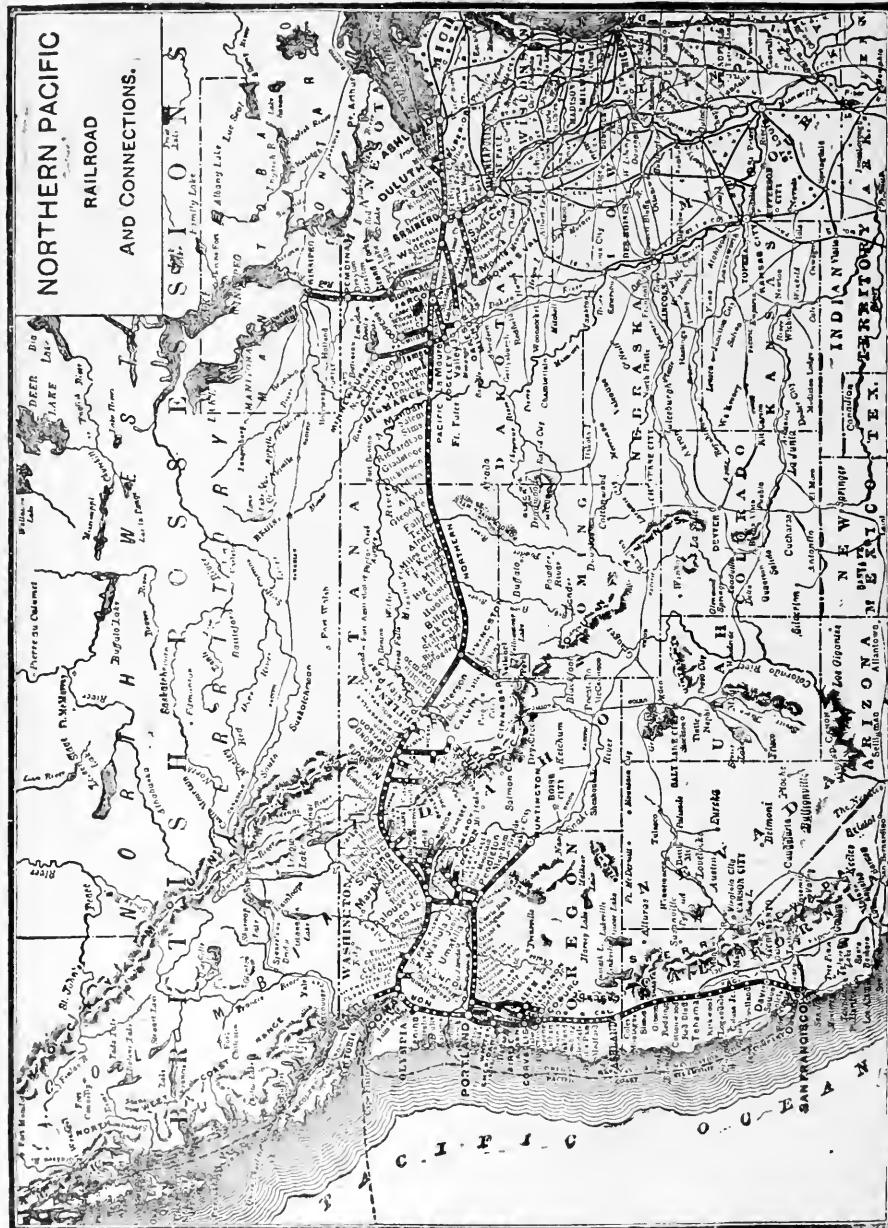
Undeveloped

Territory.

The Northern Pacific road started westward in 1870 into an absolute wilderness. Today that portion of Minnesota lying south of the line of the Northern Pacific is fairly well supplied with railroads, there being but one spot left which is as much as twenty miles from the nearest line of steel rails, and that is in the vicinity of Mille Lacs lake. But north of that road the situation is very different. This portion of Minnesota has an area of more than thirty-five thousand square miles—equal to New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island and Delaware combined. St. Louis county alone, of which Duluth is the county seat, could furnish a state as large as Connecticut and have more than one thousand square miles left.

Out of this vast area a tract can be taken containing more than twenty thousand square miles, as large as Massachusetts and Maryland combined, the outer edges of

great belts. The western belt, lying in the valley of the Red river, contains some ten thousand square miles of fertile farming lands. In the central belt stands the largest



which will be nowhere within twenty miles of a railroad. The northern part of the state may be roughly divided into three

body of white pine timber on the continent, besides great tracts of hard wood, while the eastern belt is already known to con-

tain the greatest deposit of high-grade iron ore in the world and bids fair to one day rival Colorado or Montana in the production of silver. None of these belts are entirely destitute of arable land, although the amount is very small in the eastern belt, while it is much larger in the central belt than is generally supposed. The eastern, or mineral belt, still contains a considerable amount of standing timber, although large tracts have been burned over in recent years. The settlement of the northern part of Minnesota began first on the fertile prairies of the Red River valley and is still confined mainly to a strip about thirty miles wide along that stream. The central belt is still unsettled, being penetrated only by hunters, explorers and lumbermen. It has not a mile of railroad and a considerable portion of it is still included in Indian reservations.

Duluth & Iron Range. The development of the eastern belt may be said to have begun when the construction of the Duluth & Iron Range road from Two Harbors to Tower was commenced in 1883. The road was completed to Tower in the following year and the link between Duluth and Two Harbors was built in 1886. During the past year it has been extended from Tower to Ely, a distance of twenty-one miles, giving access to a group of mines which promise, with equal development, to be as productive as those at Tower. Further extensions eastward along the Vermilion range will certainly be made, and it is reasonably sure that a connection will ultimately be made at the boundary with a road running southwest from Port Arthur. Considerable work has already been done on a road called the Port Arthur, Duluth & Western, but no progress was made thereon in 1888. Besides building the Ely extension a large amount of work has been done in 1888 in lowering the heavy grades out of Two Harbors, and this work will be continued during the present year. No announcement has been made of an intention to make extensions in other directions, but the Duluth & Iron Range road is in the hands of gentlemen who possess ability, energy and ample capital, and who may be trusted to improve to the fullest extent, in due time, the un-

limited opportunities which are open to them. The route of the road and its relations to Duluth can be better understood from the maps on Pages 56, 11 and 18, and the article beginning on Page 43.

Duluth & Winnipeg. A new era in the development of the northern portion of Minnesota was begun in 1888 by the commencement of active work on the Duluth & Winnipeg railroad. A grant of lands was made by the state in 1875 to aid in building a road northwestward from Duluth. Subsequent acts of the legislature have resulted in a pretty tangle as regards the title to this grant, a three-cornered fight for its possession being now in progress between the Duluth & Iron Range, Duluth & Winnipeg and St. Paul, Brainerd & Northwestern roads. This whole matter, however, is before the courts for settlement and it would not be proper, therefore, to express an opinion with reference to it here. The important fact is, that while the Duluth & Winnipeg will defend its right to the land grant in the courts, the building of the road is in no wise dependent upon the decision of the court. A company was organized to build the Duluth & Winnipeg a number of years ago, but that company exhausted its funds in attempting to build the heavy work necessary to surmount the hills around Duluth, and work was abandoned. Early in 1888, however, a company was organized in Duluth, called the Duluth, Northwestern & Winnipeg, at the head of which was R. S. Munger, whose name has been associated for many years with almost every enterprise for the benefit of this city, and who believed that the time had come to open up the undeveloped territory west and northwest of Duluth by a road controlled in the interest of this city. Capitalists who owned large tracts of pine lying along the route of the proposed road were interested in the enterprise, and a little later a consolidation was effected with the Duluth & Winnipeg company, the old title being used. A construction company was organized and the work, although begun late in the year, was so vigorously pushed that before the close of the year twenty miles of track were completed and accepted by the state. Profiting by the previous disastrous

experience, the heavy work nearest Duluth was left for the future, and the actual work of construction was begun at Cloquet, twenty-seven miles from Duluth, at the terminus of a branch of the St. Paul & Duluth road. (See map on Page 56.) The line keeps close to the bank of the St. Louis river until the big bend is reached, a distance of some thirty miles, whence it strikes across to the Mississippi, which it reaches at or near Grand Rapids. The contract is already let for its construction to this point, forty-five miles from the present end of track. If a definite location of the line beyond this point has been made, it has not been announced, and the dotted lines on the map simply indicate, in a general way, the acknowledged intention of the company to build both to the wheat fields of Dakota and to the capital of Manitoba. Along the line of the road between Duluth and the Red River valley, are not only great tracts of pine and hardwood timber, but large bodies of farming land, valuable deposits of iron and other metals. Just in the nick of time comes the passage of the bill by congress which throws open to settlement 3,000,000 acres of the great Red Lake Indian reservation in Northern Minnesota, leaving an unobstructed path for the building of railways between Duluth & Winnipeg. There is plenty of room for the growth of the Duluth & Winnipeg into a great railway system, and as the syndicate which is behind the road have almost unlimited means, its progress will undoubtedly be rapid. It would be difficult to over-estimate the benefit it will be to this city. The territory it will penetrate has resources which, when fully developed, would make Duluth, independent of all other causes, a city of 100,000 population.

Winnipeg & Southeastern. A company has been organized in Winnipeg under the above title, which is ready and anxious to build from Winnipeg southeast to the boundary to meet the Duluth & Winnipeg or any other road which will give them a direct line to Duluth. The air line distance from Winnipeg to Duluth is 310 miles, which is 120 miles less than the distance from Winnipeg to Port Arthur by the Canadian Pacific. The

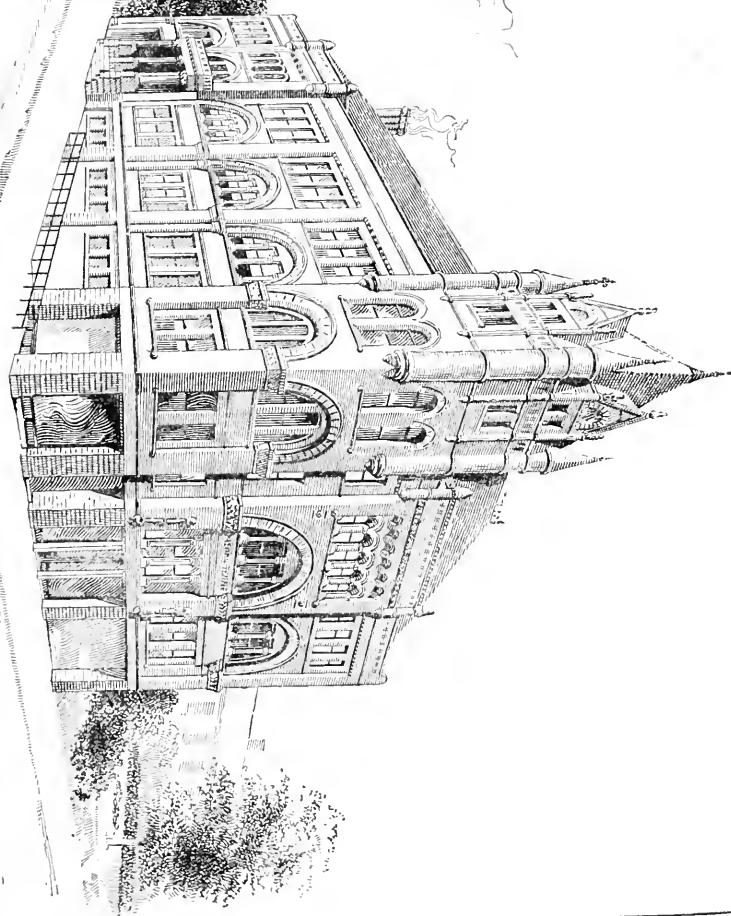
shortest rail line from Duluth to Winnipeg at present is by the Northern Pacific and Red River Valley road, by which the distance is 492 miles. Railroads seldom run in an air line, turning to one side or the other for topographical and commercial reasons, but it will readily be seen that a line can be built from Duluth to Winnipeg, which will not only materially shorten the distance by rail from one city to the other, but also make a shorter route from Winnipeg to Lake Superior.

Duluth, Red Wing & Southern. What might be termed a commercial rebellion is taking place in Southern Minnesota and Northern Iowa.

All the roads in that section belong to Chicago systems, and rates have been so arranged that the people were compelled to ship their product to, and buy their supplies from, Chicago. They could not get rates to Duluth based on distance, as the Chicago roads would be obliged to turn over Duluth-bound freight at St. Paul to other roads, thus getting for themselves the short haul to St. Paul, instead of the long haul to Chicago—an application of the short haul principle even more distasteful than the fourth section of the inter-state commerce law. The people determined that they would no longer submit to this condition of things, and as the surest and speediest way of obtaining relief, decided to build an independent line to Duluth which should not pass through St. Paul. Accordingly the Duluth, Red Wing & Southern company was organized and bonuses almost enough to build the road, amounting in the aggregate to many hundreds of thousands of dollars, were promptly voted by towns along the proposed line. Sioux City, Iowa, was also very desirous of a Duluth connection, and voted a large bonus to any road that would furnish it "without going through St. Paul." Accordingly, the Sioux City & Northeastern road was organized, which has now joined hands with the Duluth, Red Wing & Southern. The line is located from River Falls, Wis., to Sioux City, Iowa, via Red Wing and Owatonna, Minn., and a survey has been partly completed from River Falls north to Duluth. So many towns desire a Duluth connection that there will probably be two or more

Proposed
MASONIC
TEMPLE
TULUTH,
Minn.

ARMSTRONG & STEBBINS ARCHTS.





branches south of Red Wing, one of which may run to Des Moines, Ia.

Construction work was begun at Red Wing during 1888. Grading is finished on the first section of twenty-five miles, from Red Wing to Zumbrota, and the rails are laid to a point about twenty miles south of Red Wing. Work will be resumed in the spring and will probably be pushed to the north as well as south of Red Wing. The first hundred miles out of Duluth will run through a heavily timbered region, and all the rest of the route will be through a thickly settled country, producing immense quantities of grain, live stock and dairy products, the people of which are only waiting an opportunity to turn all their trade in this direction.

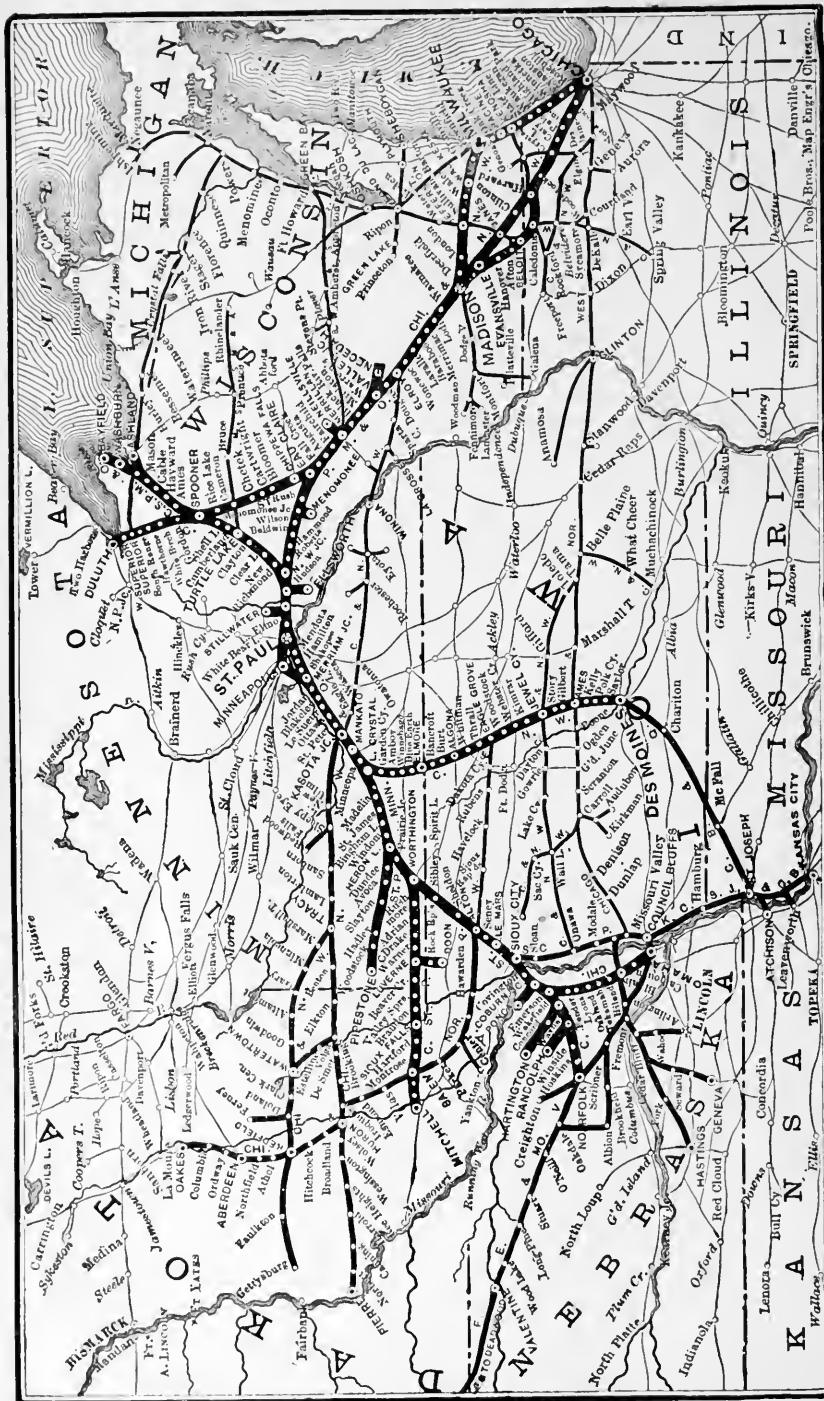
Sioux City, already an important railway and manufacturing center and wholesale distributing point, expects to realize great benefits from the construction of the Pacific Short line, which, it is claimed, is to be built in two years from Sioux City to San Diego, Cal., via Salt Lake City. The Pacific Short line will find in the Duluth, Red Wing & Southern a valuable connection, ready to carry its bulk freight to and from Duluth—a better lake port than Chicago and ninety miles nearer.

St. Paul & Duluth. This is the pioneer road over the line, then called the Lake Superior & Mississippi, having arrived August 1, 1870. It extends from Duluth to St. Paul, 154 miles, with branches to Minneapolis, Stillwater, Taylors' Falls, Kettle river and Cloquet, Minn., and Grantsburg and West Superior, Wis. The main line and branches are well shown in the map on Page 56, with the exception of the branch to West Superior. This branch was put into service in 1888, on the completion of the great bridge from Grassy Point to the Wisconsin shore, the location of which is shown on the large map of the Terminal railway. Suburban trains, which carry a large and constantly increasing number of passengers, run over this bridge from the Duluth union depot to West Superior. No new mileage has been added to the St. Paul & Duluth during the year. Grades have been reduced at thirty different points along the line between St.

Paul and Northern Pacific Junction from a maximum of seventy-nine to fifteen feet per mile. Five new depots have been built and repairs made to others. New and extensive shops have been completed at Gladstone, with all necessary tracks to them, and are now in full operation. The new passing and side tracks built add very greatly to the facility with which trains can be handled on the main line. Double track has been laid with steel rails seventy pounds to the yard from West End Junction to Duluth, a distance of five and one-eighth miles, and from St. Paul to Claymont, and is being continued on to White Bear Lake, to which point it will be completed as early in the spring as the weather will permit. Four new iron bridges are being built, for St. Louis river, Kettle river, Snake river and Moose river.

Chicago, St. Paul & Minneapolis & Omaha. This road, which is called

the "Omaha" for short, was the third to reach Duluth, the first passenger train over their line reaching this city July 6, 1885. It is a part of the great Chicago & Northwestern system, composed of the Chicago and Northwestern proper, the Chicago, St. Paul, Minneapolis & Omaha, (see map on page 80), the Fremont, Elkhorn & Missouri Valley, and the Sioux City & Pacific, aggregating over 7,000 miles, reaching from Chicago into Wisconsin, Michigan, Minnesota, Dakota, Iowa, Nebraska and Wyoming—an intricate system of connecting lines, covering a territory larger than all of France. Seven-tenths of this mileage are nearer to Duluth than to Chicago. The "Omaha" gave Duluth the first direct line to Chicago, independent of St. Paul or Minneapolis, and it is still the shortest line to the Lake Michigan metropolis. New mileage on the entire system for 1888 was 119.89, of which 81.7 miles were on the Fremont, Elkhorn & Missouri Valley in Nebraska and Wyoming, 6 miles were in Wisconsin and 32.19 in Michigan on the Chicago & Northwestern proper. No new mileage was added to the Chicago, St. Paul, Minneapolis & Omaha during 1888. The Omaha makes a report of its Duluth business this year for the first time, which will be found, with the report of other roads, in another column.



MAP OF THE CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA RAILWAY.

Wisconsin The Wisconsin Central, a map of which is shown on Central Page 63, while it does not yet enter the city over its own tracks, makes a through line from Duluth to Milwaukee and Chicago by its connection at Ashland with the Wisconsin division of the Northern Pacific. It operates a line of through sleepers between Chicago and Duluth via Ashland. No new mileage has been added during the year, but a large amount of money has been expended in improvement of track, including the laying of heavy new steel rails. There is a persistent rumor to the effect that the Wisconsin Central is to be consolidated with the Northern Pacific, and that through trains are to be run from Chicago to Tacoma. It is given here, however, simply for what it may be worth.

Milwaukee, This road, which also Lake Shore & Western. operates a line of through sleepers between Duluth and Chicago, is also dependent as yet on the Wisconsin division of the Northern Pacific for its entrance to Duluth, but it is rumored that it will build its own line to this city in the near future. A map of the road is shown on Page 64. New track laid in 1888 was 49.5 miles, of which 32.5 were on the cut-off from Rhinelander to Hurley. The gap remaining will be closed in the spring, giving a line from Duluth to Milwaukee 41 miles shorter than the present route via Watersmeet. A projected line from Houghton to Watersmeet is said to be in the interest of this road. An extension from Watersmeet to Marquette is indicated on the latest map of the line, and a recent move looks very much like an intention to parallel the Wisconsin Central into St. Paul.

Duluth Many and gratifying as Terminal are the items of growth and progress already mentioned, Railway. constituting a record of which any city might justly be proud, by far the most important railway development of 1888, considered in its relations to the future of Duluth, is yet to be described. If Duluth were built as Chicago is, on a level prairie, with opportunity for unlimited growth in all directions, the local railway situation might safely be left to take

care of its own future. But the topography of Duluth is such that the space available for railway use is not unlimited, particularly near the center of the city, where the point of rocks comes down quite close to the water's edge. The city dealt liberally with the St. Paul & Duluth and Northern Pacific railways in the early days, and the Omaha road also has terminal grounds in addition to those occupied by the roads first named. New roads were headed for Duluth and a time was certain to come when all the space available at the narrowest points would be in the possession of the railways, and other roads seeking entrance to Duluth would be compelled either to accept such terms as were offered by the roads already on the ground, or stay outside. Such was the situation, and well has it been met.

In June, 1887, Secretary Phelps, of the Chamber of Commerce, was invited to visit Pipestone and Sioux Falls and address the citizens of those places on the advantages of a Duluth connection. He returned from that trip full of two ideas. One was that the citizens of Southern Minnesota and Dakota were all alive to the importance of Duluth and anxious to secure direct rail connections with this city. The other was that our own citizens needed to be awakened to a realization of the importance of doing something to aid and encourage the roads which were headed this way and to make some provisions for their accommodation when they should arrive. The matter was brought before the Chamber of Commerce and at a meeting held on the evening of July 8, 1887, a committee was appointed to issue a call for a mass meeting to consider the railroad situation and to stir up interest in the matter. The mass meeting was held in the Opera house on the evening of July 2, when a large audience was addressed by Mayor Sutphin, Secretary Phelps and others, and as a result, a committee of fifteen was appointed to take under consideration the formation of a terminal company, as suggested in a series of resolutions offered by Secretary Phelps and unanimously adopted. The committee after due consideration and investigation decided to form a terminal company, which was duly incorporated

under the laws of the State, and at the first meeting of the directors, held September 1, 1887, A. M. Miller was elected president, G. G. Hartley, vice-president; Wm. F. Phelps, secretary and L. Mendenhall treasurer, and at a meeting held on the following day, the president, vice-president and Messrs. J. B. Sutphin, J. D. Ensign and M. R. Baldwin were made the executive committee. There was a long and tedious wrangle over the charter before it was finally passed by the city council, some very vigorous opposition being developed, not only to some of the details, but to the plan itself. The charter was finally granted April 30, 1888, the ordinance being taken by the council from the hands of the committee, which refused to report it for action. The ordinance, as passed, requires that work be commenced within one year and prosecuted with all reasonable dispatch until the road is brought to a suitable condition for the use of all roads so desiring; that the Terminal road shall be subject to such reasonable rules as shall enable all companies to use it on as favorable terms as like facilities can be procured for elsewhere in the neighborhood of Duluth, either in Wisconsin or Minnesota; that the charges demanded shall be based on the actual cost of the privileges, so that all roads shall enjoy equal privileges on equal terms, and that all rights and franchises granted by the city to the Terminal company shall be forfeited to the city, if it shall appear at any time that the company has discriminated against any road by imposing exorbitant charges; that the company must make a detailed statement semi-annually to the council, showing the number of miles of road operated, the cost thereof, when and on what account paid, the names of the companies using the road and the amounts paid by each company, which statement must be sworn to by the president, secretary, treasurer and auditor of the Terminal company, and whenever the net income above operating expenses, taxes, repairs and necessary improvements shall exceed 6 per cent on the cost of the road, the excess shall be returned pro rata to the roads using its facilities. The right granted to use certain streets and alleys is made subject to the

right of the city to lay sewers, etc., therein, and provision is made for bridging streets and avenues crossed by the Terminal tracks, when it shall be deemed necessary. It is required that tariff shall be publicly posted, and neglect or failure to comply with the provisions of the ordinance for thirty days after written notice is served, is to work a forfeiture of the franchise.

The franchise being granted, the work of securing right of way was at once begun. The magnificent plan which has been formed can be better understood from the large map accompanying this article than from a mere description. In the map the proposed route of the Terminal road is indicated by the crossed line. Beginning at the corner of Sixth avenue west and Railroad alley the line runs westward to the end of Grassy Point, a distance of about six miles, at which place a bridge will be built at some future time. At Fourteenth avenue west begins another line which extends the whole length of Rice's Point to the Northern Pacific bridge, thence crossing by a bridge over the harbor to Minnesota Point and along its nearly seven miles of length, from the canal, which will also be bridged, to the natural entry. All the right of way has been secured from Sixth avenue west to the Northern Pacific bridge, and all the way from Fourteenth avenue west to Grassy Point, except a few isolated portions.

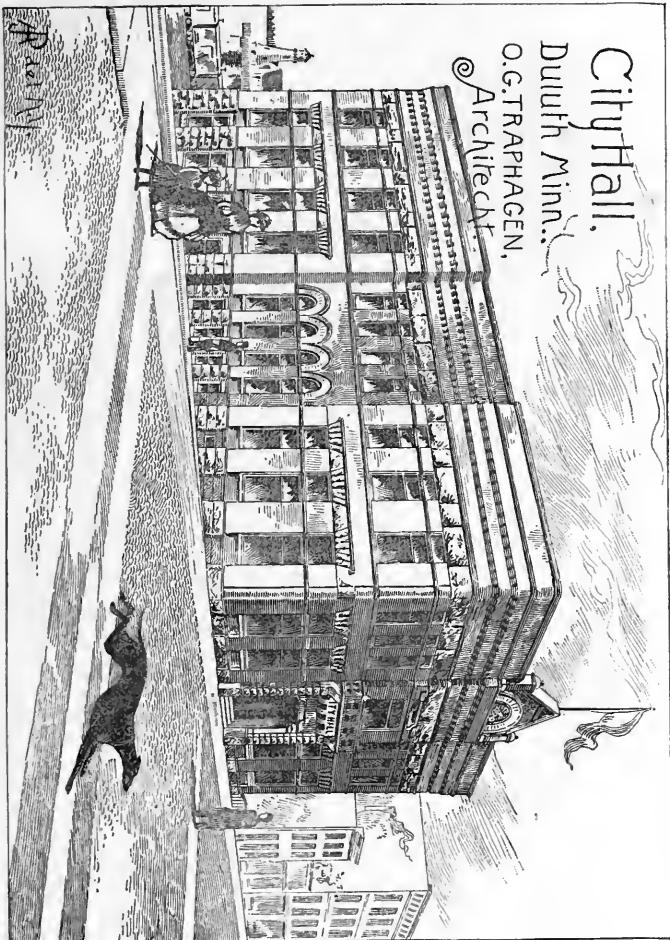
In October last a controlling interest in the stock of the Duluth Terminal railway was sold to the Eastern Minnesota—which means the St. Paul, Minneapolis & Manitoba—and the Duluth, South Shore & Atlantic—which means the Canadian Pacific—and these two powerful companies will furnish all the money needed to improve the property of the Terminal company on a magnificent scale. On October 12, a contract was let for the immediate construction of an elevated track from the Northern Pacific bridge to Sixth avenue west, work on which is now approaching completion. This method of entering the city is an inspiration, avoiding as it does all grade crossings of streets and other railways and greatly enlarging the area available for railroad purposes. The present structure is of wood, which is ultimately

City Hall.

Duluth Minn.

O.G. TRAPHAGEN,

Architect.





to be replaced with iron, allowing a double use of the right of way, the elevated tracks being exclusively for passenger traffic, and a second series of tracks being built for freight business on a level with existing roads. A union passenger depot, freight warehouses, a round house and other necessary buildings are to be erected on the land condemned by the Eastern Minnesota, (see Page 67) and the property improved in all respects as fast as needed. Probably half a million dollars will be expended in the next few months, and a million and a half in the next year.

Practically all the work of securing the right of way has been done by M. R. Baldwin and the negotiations whereby the Eastern Minnesota and the Duluth, South Shore & Atlantic have been led to acquire an interest in the Terminal system and furnish the money for its development have been conducted by Messrs. Miller, Phelps and Baldwin. These roads hold the charter of the Duluth Terminal railway subject to all the provisions thereof, and these provisions, which will be enforced by the city, insure easy and economical entrance to all the roads which may reasonably be expected to knock at the doors of Duluth before the year 1900.

The Record for 1888 It was stated at the outset that no city was ever

Summed Up. able to show a more gratifying record of railway progress than could Duluth for the year 1888, and it is hoped that the claim has been made good in the preceding pages. Before leaving this branch of the subject it may be well to summarize the railway record of the past year, the results gained being classified under five heads, as follows:

First—The attainment of complete commercial independence through the coming of the Duluth, South Shore & Atlantic, which flanks Chicago's position and opens a new and shorter route to the eastern seaboard.

Second—The recognition of Duluth as the natural terminal point and coming railway center of the Northwest, and the turning to this city of the trade of a great territory already developed, through the coming of the Eastern Minnesota—a portion of the Manitoba system. Under this head,

also, must be included the building of the Duluth, Red Wing & Southern.

Third—The opening, or more properly, the resumption, of trade relations with Manitoba and the Canadian Northwest, through the breaking of the Canadian Pacific's monopoly and the lease of the newly built Red River Valley road to the Northern Pacific.

Fourth—The beginning of an independent development of a region rich in resources and exclusively tributary to Duluth, although yet unsubdued, through the building of the Duluth & Winnipeg.

Fifth—The working out of a plan which insures to all roads coming to Duluth an entrance to the heart of the city which is certain, easy and economical, through the building of the Duluth Terminal railway.

And even this remarkable showing does not include such extensions as that of the Duluth & Iron Range, nor take account of the enormous increase of business and in facilities for handling business made by the roads which have done, and are doing, so much for the prosperity of Duluth, and which are left out of this showing simply because they arrived prior to 1888. Let the city which has a better record produce it.

A Look Ahead. President Colby, of the Wisconsin Central railroad, said when in Duluth last summer: "The railroads are recognizing the importance of Duluth's position and are governing themselves accordingly. They have plans which will be carried out in the next six months and which will astonish the most ardent believer in Duluth. Within one year you will have five or six railroads which you don't dream of having today."

As to what these half dozen unexpected railroads may be, let the railroad men speak for themselves. First, reference may be made to a conversation between Sir Henry Tyler, of the Grand Trunk, and M. R. Baldwin, president of the Duluth Chamber of Commerce, the latter regretting that it was the Canadian Pacific and not the Grand Trunk that had gotten control of the South Shore. Said Sir Henry: "They expected to have had the South Shore road, but it does not follow because the Canadian Pacific have secured a holding in this road

that the Grand Trunk may not use this line to reach Duluth."

"And if you fail in that—then what?"

"Then," (positively) "the Grand Trunk will come to Duluth anyway. Be patient," adding in French, "'All things come to him who waits.' Be sure, my dear man, the Grand Trunk is coming to Duluth."

General Manager Hickson made also substantially the same statement to Secretary Phelps.

Another significant utterance comes from a member of the Van Horne party, recently visiting Duluth. He let it be known that the New York Central was greatly disappointed to have missed securing control of the South Shore. They supposed arrangements were all made to that end. But while Mr. Vanderbilt was in Europe hobnobbing with crowned heads and Mr. Depew was chasing about the country trying to secure the presidential nomination, the Canadian Pacific took the advantage and gathered in the South Shore. "But," said he, "the Canadian Pacific secures only this shore line. The New York Central will come to Duluth." Asked by what route, he said: "Direct from St. Ignace," and referred to the fact that a partial survey for that line had been made by the New York Central and the money nearly raised to build it. This plan was, however, abandoned in expectation of securing the South Shore. In the same connection it may be said that Secretary Phelps has assurances from a high authority, whose name cannot be given, that the Chicago & Northwestern has under advisement a line from some point in Central Dakota, Columbia perhaps, direct to Duluth. This would give the Vanderbilt system a new connection between Northern Michigan, and thus with all its Eastern lines, and Dakota, and thus with all its Northwestern lines. To a plan so plausible one's belief is half committed without further authority.

But in President Colby's remark the Wisconsin Central itself must be included. Either it will purchase the Northern Pacific's Ashland division—that deal which has been on and off ever since one can remember—or with the Milwaukee, Lake Shore & Western, which also has designs toward Duluth, build a new line. In any

case the Wisconsin Central intends nothing less than through trains from Tacoma to Chicago via Duluth.

Again, the old Minnesota & Northwestern, the Kansas City line, when it relinquished its options on the Nemadji river, by no means abandoned its intention of reaching the head of Lake Superior, but rather determined to enter Duluth and not Superior. It is beyond doubt that the plan will be fulfilled, but it is quite as likely to be by a mergence of the St. Paul & Duluth as by any other means.

Clearly Mr. Colby spoke within bounds in presaging the early entrance to Duluth of half a dozen roads.

But, throwing aside all conjecture and surmise, there are certainties enough ahead to make a most pleasing outlook. Work on the Duluth Terminal will proceed rapidly and steadily; the Duluth & Winnipeg will push on across the State to the Red River valley, and the Manitoba's Crookston line will follow like a shadow and arrive at the same time—plenty of room for both, though; the Eastern Minnesota will build from Hinckley to Coon Creek, making the shortest line from Duluth to the Twin Cities; the Portage extension will be finished and the Brandon branch of the Red River Valley line at least begun, and the Winnipeg & Southeastern will start for the boundary line to meet the Duluth & Winnipeg or some other line from Duluth; the Duluth, Red Wing & Southern will be pushed forward, northward probably and southward certainly, the Hurley cut-off of the Milwaukee, Lake Shore & Western will be finished, and the new line of this road from Watersmeet to the Sault will be started eastward. A new short line service will be started by the Eastern Minnesota, making the run from Duluth to West Superior over the elevated tracks in ten minutes or less; passenger service between Duluth and St. Paul will be started over the same line; through sleepers will run from New York and Boston to Duluth over the Duluth, South Shore & Atlantic—and possibly on to Tacoma over the Northern Pacific; the St. Paul & Duluth limited will make the run to St. Paul and Minneapolis in four hours, and the time to Chicago will be reduced on the Omaha. This

is not all, but it is enough to make a bright outlook for 1889.

Railroad Freight Traffic. It is easier sometimes to write in glowing terms of what is going to be done, than to make a creditable showing of what has been accomplished, but Duluth can turn with confidence from the statement of the prospects for future railway growth to the figures which show the business done by the railways in 1888. Four roads give reports, in pounds, of the freight handled at Duluth, and a fifth—the Duluth & Iron Range—reports its total freight tonnage, but does not separate its Duluth business, although this is considerable. The aggregate amount of freight received and forwarded by the four roads above mentioned—the St. Paul & Duluth, Northern Pacific, Chicago, St. Paul, Minneapolis & Omaha and Eastern Minnesota—was 2,947,869,241 pounds, nearly 100,000 car loads. The traffic of the Eastern Minnesota dates back only two months and a half, and its grain and flour was chiefly handled across the bay in its West Superior yards and so does not appear in its report. The figures given for the Northern Pacific include the business of the Wisconsin Central, Milwaukee, Lake Shore & Western and the Duluth, South Shore & Atlantic, all of which is handled in Duluth by the Northern Pacific. All classes of freight show an increase in amount except grain, and except for the falling off in that the gain would have been enormous. The amounts of coal, flour and merchandise show the largest increase over 1887.

ST. PAUL & DULUTH.

Commodity.	Received.	Forwarded.
Live stock.....	4,302,500	349,430
Salt.....	.....	23,780,240
Oil.....	1,768,952	10,633,160
Coal.....	.....	679,783,070
Flour.....	291,657,951	.....
Grain.....	23,642,740	7,259,820
Lumber.....	32,962,865	71,790,010
Lime.....	.....	16,315,500
Ore.....	.....	108,714,250
Merchandise.....	56,656,439	59,532,003
Brick.....	48,366,340	.....
Hay.....	11,715,660	.....
Machinery.....	9,130,311	.....
Total.....	689,203,758	978,147,489
Grand Total.....	.....	1,667,351,247

NORTHERN PACIFIC.

Classified in the same manner, the figures for the Northern Pacific are as follows:

Commodity.	Received.	Forwarded.
Merchandise.....	19,774,460	57,077,610
Flour, etc.....	31,934,350	1,344,580
Iron.....	3,054,000	2,581,330
Salmon.....	4,451,150	.....
Wool.....	5,933,860	.....
Matte.....	9,416,640	.....
Bullion.....	445,814	.....
Lumber.....	12,621,700	88,431,440
Lime and cement.....	.....	7,217,990
Logs.....	20,597,500	.....
Live stock.....	3,050,000	2,949,000
Coal.....	14,407,100	325,719,430
Brick, etc.....	17,056,000	.....
Railroad material.....	5,620,500	23,498,899
Wheat.....	258,769,590	.....
Total.....	408,012,614	489,431,579
Grand Total.....	.....	897,444,193

For the year the Northern Pacific forwarded by lake the following freight: Flour, 19,164,760 pounds; salmon, 4,451,150; wool, 5,933,860; matte, 9,576,640; bullion, 445,814; merchandise and railroad material, 1,857,830.

THE OMAHA ROAD.

The Chicago, St. Paul, Minneapolis & Omaha did a fine business, which it reports in a slightly different form from the other roads, the amounts received and forwarded being added together with results as follows:

Commodity.	Pounds.
Grain.....	20,783,750
Flour, etc.....	47,626,255
Coal.....	130,750,495
Salt.....	10,606,000
Stone.....	22,160,090
Live Stock.....	1,450,000
Lumber.....	20,623,900
Miscellaneous.....	24,959,111
Merchandise.....	71,189,016
Total.....	353,402,617

THE DULUTH & IRON RANGE gives the figures of all its freight traffic for all stations. Its total traffic for the year amounted to 600,483 net tons, of which 510,000 were iron ore. Of this amount more than 4,200 car loads, containing over 63,000,000 tons, (or to be exact, 126,731,976 pounds), were shipped through Duluth by rail, going principally to Chicago and

Joliet. The remainder was shipped east by boat from Two Harbors.

Its south-bound freight was as follows:

Commodity.	Pounds.
Stone.....	4,392,000
Iron ore.....	1,119,440,000
Manufactured iron.....	900,000
Lumber.....	36,992,000
Miscellaneous.....	1,750,000
 Total.....	 1,183,470,000

Its north-bound freight was as follows:

Commodity.	Pounds.
Grain.....	2,460,000
Flour.....	1,114,000
Hay.....	3,678,000
Other agricultural products.....	1,996,000
Provisions.....	9,216,000
Live stock.....	1,384,000
Dressed meats.....	1,326,000
Salt meats.....	482,000
Coal.....	21,536,000
Oils.....	454,000
Manufactured iron.....	3,000,000
Cement, lime and brick.....	2,950,000
Liquors.....	1,492,000
Miscellaneous.....	26,404,000
 Total.....	 77,492,000

THE EASTERN MINNESOTA, from October 1 to December 15, received and forwarded the following freight at Duluth:

Commodity.	Received.	Forwarded.
Oil.....	37,960	736,000
Coal and coke.....	114,100	11,005,000
Iron.....		90,000
Grain.....	3,803,350	732,350
Lumber.....	1,223,000	113,830
Lime.....		162,850
Salt.....		110,100
Feed.....	24,000	.....
Live stock.....	20,000	.....
Merchandise.....	230,530	632,560
Brick.....	535,450	.....
 Total.....	 5,988,300	 12,582,780
 Grand Total.....	.....	18,571,170

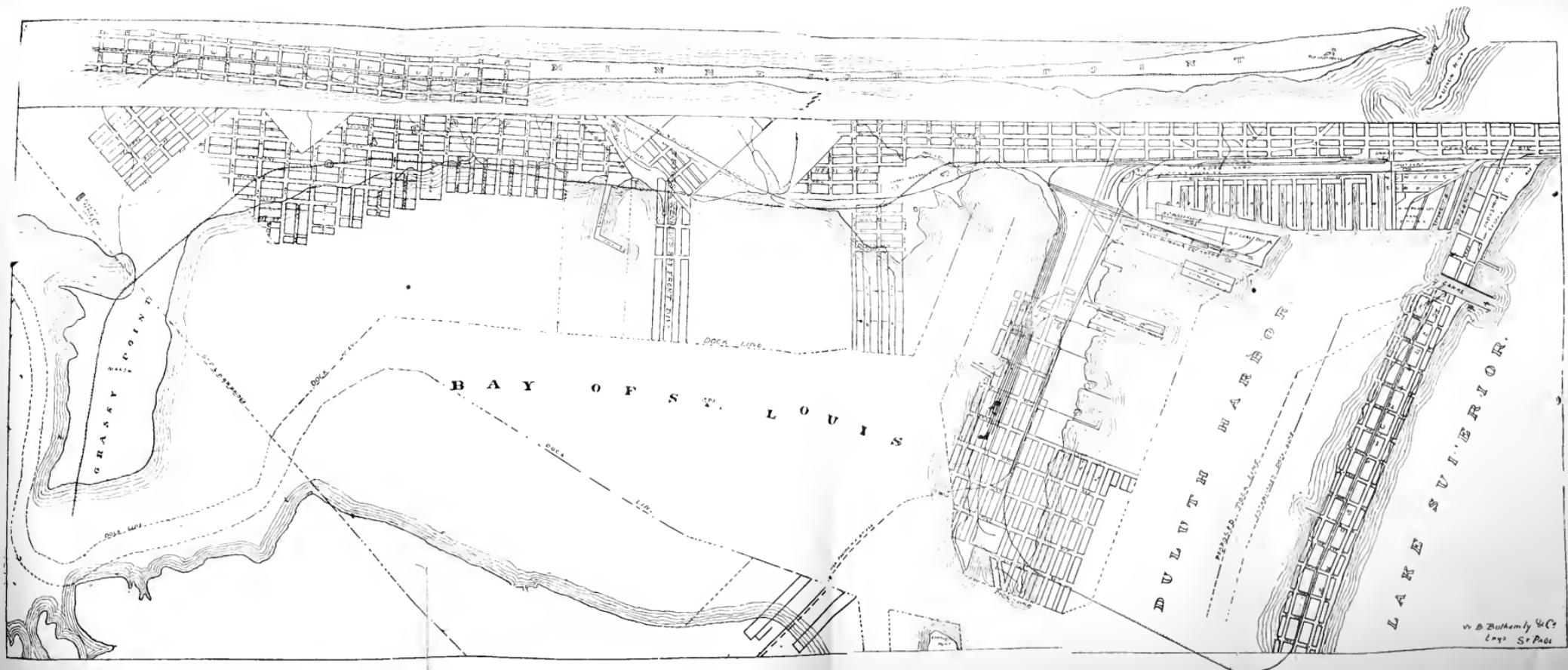
An Odious Comparison. Comparisons are said to be odious, and the following will no doubt be quite odious—to St. Paul. Since the figures given were in type, a very close approximation to the exact tonnage at Duluth of the Duluth & Iron Range has been obtained.

With their figures included, the total freight handled at Duluth in 1888 amounted to 3,147,869,241 pounds, while the figures for the Minnesota Transfer, between St. Paul and Minneapolis, foot up only 2,974,278,036, a difference in favor of Duluth of 173,591,205. Again, St. Paul claims to be the commercial center of the Northwest. The total car loads of freight handled at St. Paul in 1888 amounted to 251,000. The total car loads handled at Duluth were 105,000. But St. Paul is more than five times as large as Duluth, yet she did less than two and one-half times as much freight business as Duluth. In other words, Duluth handled more than twice as much freight in proportion to population as St. Paul did. The odious end of that comparison does not project toward Duluth.

Total Mileage And New Construction. The total mileage of all railways belonging to the Duluth system is over 16,000 miles, as shown by the table given below. For convenience the mileage of the Eastern Minnesota and Montana Central railways is included with that of the St. Paul, Minneapolis & Manitoba, and the various parts of the great Northwestern system are included with the Omaha. The new mileage of the Duluth & Winnipeg and Duluth, Red Wing & Southern is also given although not yet in operation.

St. Paul & Duluth.....	252
Northern Pacific and branches.....	3,850
Chicago, St. Paul, Minneapolis & Omaha and connecting systems.....	7,067
St. Paul, Minneapolis & Manitoba.....	3,160
Duluth & Iron Range.....	117
Duluth, South Shore & Atlantic.....	529
Wisconsin Central.....	775
Milwaukee, Lake Shore & Western.....	605
Duluth & Winnipeg.....	20
Duluth, Red Wing & Southern.....	20
 Total.....	 16,395

The year 1888 was not a remarkable year for railway construction, only about half as much new track being laid as in 1887. Most of the work in the Northwest during the past year was confined to short lines, the longest extension being that of the Manitoba system from Willmar, Minn., to Sioux Falls, Dak., 147 miles. Large expenditures have been made in reducing grades, taking out curves and other improvements of great value and importance, but which can not be mentioned in detail.



MAP OF THE TERMINAL RAILWAY

tion to the
Duluth & Irc

New mileage for 1888 on roads belonging to the Duluth system is as follows:

	Miles.
St. Paul, Minneapolis & Manitoba.....	321.49
Montana Central.....	73.00
Eastern Minnesota.....	68.30
Northern Pacific.....	76.80
Red River Valley.....	66.00
Chicago & Northwestern.....	88.19
Duluth & Iron Range.....	21.00
Duluth, South Shore & Atlantic.....	54.58
Duluth & Winnipeg.....	20.00
Duluth, Red Wing & Southern.....	20.00
Milwaukee, Lake Shore & Western.....	49.50

Total..... 858.86

More than half of this total belongs to the Manitoba system, of which 321.94 belongs to the St. Paul, Minneapolis & Manitoba proper, divided as follows:

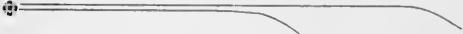
	Miles.
Willmar to Sioux Falls.....	146.90
Watertown to Huron.....	69.82
Church's Ferry to St. John.....	55.21
Crookston to Fosston.....	44.68
Great Falls to Smelter.....	5.33

Total..... 321.94

Add to this the Eastern Minnesota, from Hinckley to Duluth, 68.30 miles, and the the Montana Central from Helena to Butte, 73 miles, and it makes a total for the entire system of 462.79 miles.

The 76.8 miles of new construction on the Northern Pacific is made up of a number of short lines all of which were among or west of the Rocky Mountains. The Red River Valley line, 66 miles long, from Winnipeg to the boundary, was built by the Province of Manitoba, but is operated as a part of the Northern Pacific system. Of the new construction on the Milwaukee, Lake Shore & Western, 32.5 miles were on the new line from Rhinelander to Hurley, which will rednce the distance from Duluth to Milwaukee over their line, by 41 miles.





DULUTH.

BY WM. HOSEA BALLOU.

Upon Superior's finger tip,
Far pointing toward the boundless West,
Upborne above the white-winged ship,
Her battlements, rock-founded, rest.

Around her oceans wield their sway
Of billowed grains and roaring pines;
And in her cells fast chained and bound
Are precious ores in glittering lines.

Oh! child on whom the Pole star shines—
Mold of Diana yet to be;
The Western Adriatic waits
The coming maid, queen of the sea.

—*From Daily News Annual, 1888.*



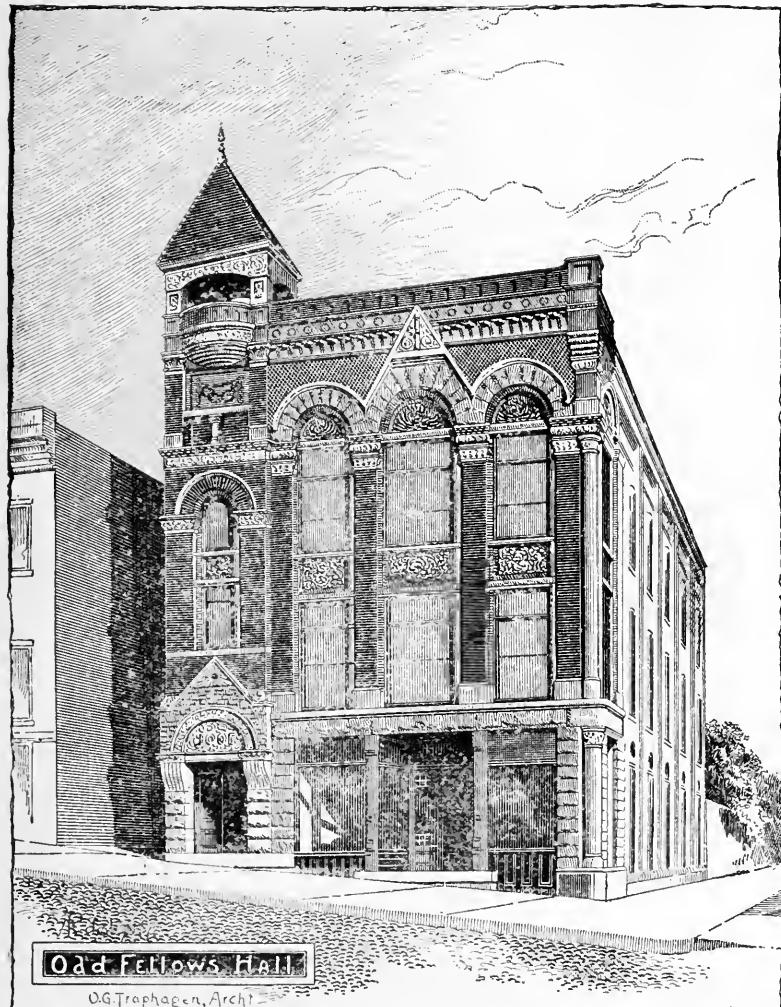
The Realty Market.

WHILE the number of sales of Duluth realty have not been so large during 1888 as during the previous year, one who has watched the course of events can not fail to be

more substantial evidence of the high present and prospective value of Duluth realty than the experiences of all past years combined. When the vast number of transfers of property made during the early months

of 1887 are considered; when it is remembered that thousands of these transfers were made upon payment by the purchaser of 25, or 33½, or 40 per cent of the selling price, and that failure to pay balance meant foreclosure, the fact that the number of foreclosures has been small is most impressive, and adds to one's faith in the stability of values.

The fact that 1888 was a "presidential" year has had its influence on investment here



impressed with the fact that the history of the year, taken in its entirety, gives

just as it did in all lines of business and in all parts of the country, but not-

withstanding this, prices of Duluth property were not only maintained but actually advanced, and this with good reason. The advance was merely the natural result of improved conditions. Three great manufacturing institutions have been located here; four new railroads have been added to the fast-developing Duluth system, and the Manitoba has become interested in a terminal railway within the corporate limits of Duluth which promises to become one of the greatest terminal systems in the world; an iron boat, destined to revolutionize shipping on the inland seas, invented by a Duluth man, built by Duluth money and pluck, has proven the invention all and more the most sanguine expected, and assures the location here of large ship yards; streets and avenues, impassable a year ago, have been graded, leveled, improved and beautified; sewers and water and gas systems have been extended; miles of sidewalk have been laid; Superior street has been changed from a mud-hole into one of the most beautiful and substantially paved streets on the continent; millions have been spent in private and public improvements. Along all lines advancement has been made, and real estate has advanced in sympathy and without "booming."

Until November 15 real estate was inactive. Then the influence of the great manufacturing establishments located and building at West Duluth began to be felt, and real estate in that section found an active demand at fair prices. Something of a craze for West Duluth property was experienced, but after a few weeks the feeling of strength and a renewal of activity was felt throughout the market, and December witnessed a growing demand for hill property and acres in all directions.

Following is the record of the year in transfers and amounts by divisions. It is indeed one of which any city twice its size might justly feel proud. But if 1888 has been a great year, 1889 promises to exceed it. Never has there been so strong a feeling of confidence in the sure and growing values of Duluth realty; never such a determination to develop the opportunities now offered:

DIVISION.	No. of Transfers.	Total Amount of Transfers.
Acre property.....	577	\$1,840,166
Beckman's addition.....	8	6,150
Bay Front division.....	14	171,895
Banning & Ray's addition.....	8	28,367
Bay View addition.....	41	76,168
Clague & Prindle's addition.....	1	2,000
Cowells' addition	1	2,000
Central division.....	26	278,990
Clinton Place addition.....	22	51,450
Cullen's addition.....	1	25
Dodge's addition.....	15	30,600
Dickerman's addition.....	2	1,350
East Duluth.....	2	101,350
Ely	70	45,675
Endion division.....	115	244,425
Forest Park addition.....	2	9,800
First division.....	125	849,341
Fond du Lac.....	6	4,866
Gay's divs.on.....	5	5,500
Gray's addition.....	7	2,800
Grassy Point addition.....	24	10,685
Hunter's Grassy Point addition.....	159	190,490
Harrison's addition.....	11	8,075
Harrington's addition.....	2	1,125
Highland Park addition.....	11	18,350
Heim's addition.....	25	30,025
Hall's addition to Oneota.....	18	29,595
Hazlewood addition to Oneota.....	10	12,700
Industrial division.....	18	70,975
Joint transfers.....	20	102,640
Kimberly & Stryker's addition.....	39	29,693
Lake View addition.....	8	117,050
Lower Duluth.....	75	35,810
London addition.....	24	33,955
Langellier's addition.....	1	600
McLachlan's addition.....	2	11,500
Millard's addition.....	1	9,000
Munger's sub-division.....	2	14,500
Macfarlane's Grassy Point addition.....	36	23,610
Martin's division.....	25	40,100
Merritt's addition to Oneota.....	7	7,870
Minnesota Point.....	1	2,000
Myers' re-arrangement 2d division.....	7	3,875
Myers' sub-division.....	1	25,000
Myers' Park	3	10,300
Minnewaken addition.....	18	12,440
Murray Hill addition.....	2	2,082
Murray & Howe's addition.....	2	40,000
Norton's division.....	1	6,500
New Endion.....	4	5,600
Spalding's addition.....	10	11,300
Portland division.....	104	224,028
Prospect Park.....	3	5,500
Porter's addition to Ely.....	7	2,550
Oneota.....	15	33,000
Rice's Point division.....	8	68,423
Summit Park.....	1	8,000
Second division.....	284	640,840
Pioneer & Zenith addition to Ely.....	22	6,495
Superior View addition.....	8	61,750
Third division.....	237	741,886
Tower	33	28,795
Triggs & Kennedy's addition.....	4	92,000
Triggs & Kennedy's Bay Front.....	11	11,125
Unknown.....	10	13,045
Upper Duluth.....	44	96,364
West Duluth, 1st division.....	28	250,480
West Duluth, 2d division.....	26	25,308
West Duluth, 3d division.....	2	500,500
West Duluth, 4th division.....	42	85,250
West End addition.....	3	6,282
Stuart's addition.....	20	13,750
Transfer division.....	4	15,083
Whiteside's addition to Ely.....	30	22,708
Willard's addition.....	2	6,800
Walbank's addition.....	2	1,850
West Park division.....	16	9,720
Town of Spalding.....	11	6,900
Total.....	2,781	\$7,654,938
Unrecorded Transfers.....		2,500,000
Grand Total.		\$10,154,938



PILGRIM CONGREGATIONAL CHURCH.

Building and Improvements.

IF Duluth has done remarkably during the past year from a commercial standpoint, she has done more remarkably in street improvements. One year ago she was just beginning to get an inkling of what advantages come from having even a few good streets. At that time Third street was well on toward completion, Superior street was in fair condition in the West End, Lake avenue had just been extended several blocks up the hill, Tenth and Twelfth avenues east had been opened, while Bench street had been given a new grade. Second street, which had been in good condition from previous years, was also available; but Michigan street, a new thoroughfare, was not in the best of shape. Outside of these, Duluth might be said to have had no streets that were worthy to be called such. Since then the transformation has been most wonderful. Superior street has been paved for blocks through the business portion of the city and, with the exception of that part where it joins Michigan street and Piedmont avenue, affords opportunity for most delightful drives. Third street has been changed into an elegant boulevard, whose macadamized bed extends for a distance of four miles, from the eastern to the western end of the city, encircling the middle of the grand old hill in its course. Fourth street, still higher up the hill, has also been graded and macadamized for over three miles at a cost of \$130,037. Second street has been extended two blocks westward. Michigan street between Eighth and Thirty-fifth avenues west has had nearly \$120,000 expended upon it and will not be finished until next summer. Railroad street has been lengthened so as to form a perfect link between the East and West Ends. Twenty-fourth, Twenty-third and Twenty-first avenues west have all been made into handsome residence streets, while Fifth and Sixth avenues west

and First and Sixth east have been made passable for vehicles in their steepest parts, Fifth avenue west being graded as high as Sixth street and First avenue east as high as Ninth street.

Perhaps the most daring attempt on the part of man to overcome nature in this vicinity is to be seen in the improving of First street, which is now in progress. This street, in its eastern portion, will ultimately be one of the chief retail thoroughfares, and so it was determined to improve it at a cost of over \$400,000. The work was begun in midsummer and has been vigorously prosecuted ever since, the amount expended thus far aggregating \$105,000. There are three huge pieces of rock-work, one in the eastern and two in the western portions of the city. On these numerous steam drills are kept at work continually, hundreds of men being employed to load the broken rock on cars, by which it is quickly carried away. The faith in the city that was necessary to the beginning of such a stupendous work challenges the admiration of every one who visits the Zenith City. On Michigan street at Twelfth avenue west another huge rock excavation is well under way. This will change the course of the street. Near by a large tunnel is being bored through the solid rock to afford a passage for the waters of Glen creek, which runs under the street. The rock cut on Fourth street, which was in progress last winter, has been completed during the year and has done its share toward making that street the finest in the city.

The new paving on Superior street is one of the most substantial pieces of work ever done in the Northwest. For sixteen blocks a concrete foundation was laid and upon this were placed cedar blocks. The work cost \$118,479.22 and consumed all the summer and along into November. The fol-

lowing from The Duluth Daily News of November 10, regarding this work, will be of interest:

"The whole amount of dirt removed was 20,000 cubic yards, notwithstanding that the street was practically level before the work was begun. Three hundred cubic yards of rock were also removed, and rock of the hardest kind. The curbing put in will measure 14,500 linear feet, or nearly three miles. It took 160,000 granite blocks to pave the space between the rails of the car tracks, while 1,600 cords of cedar blocks, covering an area of 40,000 yards, carefully laid by experienced hands, one at a time, were used on the remaining space. Only 11,000 barrels of cement were used in the concrete, it being mixed with 9,000 cubic yards of fine sand, 2,000 cubic yards of beach gravel, and 10,000 cubic yards of crushed stone. To supply enough of the crushed stone required the services of two huge crushers, run by powerful engines day and night. Eighty thousand gallons of tar were spread on the cedar blocks. Added to all this were 18,000 feet of drainage placed under the curbing."

The amount expended in 1887 on the streets, exclusive of sewers and sidewalks, was \$383,612.75. Last year it was \$571,074.50. During the season just gone 276,191 yards of earth have been excavated by city contractors and 71,546 yards borrowed. The rock removed amounted to 96,273 yards. Of timber, 1,791,685 feet, board measure, were used, and of stone curbing 18,416 linear feet. There were 9,798 cubic yards of stone surfacing, 26,110 of gravel surfacing and 12,190 of masonry. The paving put down occupied a space of 43,709 square yards. The total length of streets improved was 21.8 miles.

Storm When it was decided to sewers. pave Superior street, the engineer determined that storm sewers should first be built to carry off surface water from the avenues. How generally this has been done is shown by the following statement of storm sewers constructed:

Superior street from Third avenue east to Fourth avenue west.

Twenty-fourth avenue west from Michigan street to Miller's creek.

Twenty-first avenue west from Railroad alley to Fifth street.

Twentieth avenue west from Railroad alley to Superior street.

Garfield avenue from Railroad alley to Superior street.

Twelfth avenue west from Railroad alley to Superior street.

Seventh avenue west from Michigan street to First street.

Sixth avenue west from St. Paul & Duluth railroad to Fourth street.

Fifth avenue west from St. Paul & Duluth railroad to Fifth street.

Fourth avenue west from Michigan street to First street.

Third avenue west from Michigan street to First street.

Second avenue west from Michigan street to First street.

First avenue west from St. Paul & Duluth railroad to Cascade square.

Lake avenue from Michigan street to Superior street.

First avenue east from St. Paul & Duluth railroad to Fourth street.

Second avenue east from Superior street to First street.

Third avenue east from Michigan street to First street.

Washington avenue across Superior street.

In these storm sewers 10,933 linear feet of pipe were used, ranging from 12 to 24 inch. There is 610 feet of concrete sewer, 4,412 of brick and 229 feet of tunnel through solid rock. The total length of storm sewers, all built this year, is 16,184 feet, or 3.07 miles. There are 119 catch-basins and 69 manholes. Excavation includes 20,232 cubic yards of earth and 1,283 of rock. Timber used amounted to 24,135 feet. The heaviest piece of work under this head was on First avenue west, built large enough to hold Clark House creek in a spring freshet and costing \$33,462.76. The storm sewers this year cost \$98,715.19, of which all but \$5,687.12 has been paid over to contractors.

Sanitary Thirty-two contracts have sewers. been let for sanitary sewers this year, bringing the sewerage system up to 12.12 miles. Following is the construction of sanitary sewers:

Michigan street from Lake Superior to Seventh avenue west.

Superior street from Eighth avenue east to Eighth avenue west.

First alley from Second avenue east to Piedmont avenue east.

First street from Fourteenth avenue east to Missouri avenue.

First street from Sixth avenue east to Thirteenth avenue east.

First street from Eighth avenue west to Fifth avenue east.

Second alley from Piedmont avenue east to Fifth avenue east.

Third street from near Sixth avenue east to Fifth avenue west.

Fourth alley from Fifth avenue east to Fourth avenue east.

Fourteenth avenue east from Lake Superior to First street.

Tenth avenue east from Bench street to Fourth street.

Seventh avenue east and Washington avenue from Superior street to Fourth street.

First avenue east from Superior street to Fourth street.

First avenue west from Superior street to First street.

Second avenue west from Michigan street to Fourth street.

Third avenue west from Michigan street to Second street.

First avenue west from Third street to Fourth street.

Earth excavation amounted to 19,350 cubic yards and rock to 5,138 yards. Pipe ranging from 12 to 24 inches was laid to the amount of 22,450, and the length of brick sewer laid is 9,018 feet. There has been added to the sewerage system this year 4.26 miles, making, with 7.94 miles previously constructed, a total of 12.21 miles or 64,452 linear feet. The length under contract but unfinished is 3,972 linear feet. There has been paid to contractors \$57,097.14 with \$5,447.65 yet due them, while the engineer's estimate of the remainder of the work is \$16,200.

Summary of Public Improvements. The total cost of street improvements this year has been \$715,091.26, and only four contracts, two on Michigan street and two on First street, are carried over. The expenses of the engineer's department have closely approximated \$25,000, about 3.5 per cent of the work done. In comparison it may be said that St. Paul's engineering department by the figures of 1887 cost 3.8 per cent. This expense is borne by the property under improvement, not by the city treasury. It is the rule to add 10 per cent to all assessments for engineer's expenses and to allow this as a rebate on immediate payments. The amount not subject to this rebate this year is nearly \$350,000, giving \$35,000, which will about cover the cost of the engineer's department, the board of public works and the controller's office.

Sidewalks laid this year, not under the charge of the city engineer, amount to 49,681 linear feet, or 9.4 miles. Of this 43,495 was 8-foot sidewalk.

Railway, Marine and Warehouses. The faith in Duluth of the great corporations that have made Duluth their objective is a most encouraging sign. Over \$1,000,000 have been expended by them at Duluth this season, and the work done was in the direction of improved facilities for handling the vast and

growing traffic of Duluth. The figures are as follows:

ELEVATOR COMPANIES.

Improvements, including new machinery, buildings, additions, belting, roofing, etc. \$40,000

DOCKS WAREHOUSES, ETC.

Munger & Markell, improvements to dock..	\$ 4,000
Pioneer Fuel company, docks, etc.....	80,000
Northwestern Fuel company, docks etc.....	12,000
Jake Leidel, improvements to dock etc..	2,000
H. Patterson, improvements.....	1,000
G. Spencer & Co., warehouses and dock....	25,000
W. C. Sargent & Co., new dock, etc.....	12,000
Williams, Upham & Co, new dock, etc.....	32,000
B. B. Inman, new passenger steamer, rebuilding, etc.....	45,000
Williams Upham & Co., rebuilding dredge	8,000
Duluth Roller mill, improvements.....	2,800
Standard Oil company, new docks, warehouses, trackage facilities, rebuilding, etc.,	60,000
Vincent & Hubbard, lumber mill.	13,000

RAILROAD IMPROVEMENTS.

St. Paul & Duluth grading, new tracks, new buildings, bridges, etc., inside city limits	\$250,000
Northern Pacific, grading, new tracks, new warehouses, improvements to docks, new stock yards, etc., all inside city limits.....	175,000
Chicago, St. Paul, Minneapolis & Omaha, various improvements to company buildings, new switch tracks, etc., all inside city limits.....	40,000
Eastern Railway of Minnesota, company office and warehouse improvements.....	2,500
Duluth & Iron Range, new tracks, retaining walls and other improvements	65,000
Duluth, South Shore & Atlantic, terminal facilities and local offices improvements..	3,000
Wisconsin Central, local offices and other improvements.....	2,500
Milwaukee, Lake Shore & Western, local offices and other improvements	2,500
Duluth Terminal Railway company, land condemned, trackage facilities, work done etc.....	132,000
West Duluth Incline railway, work done....	1,000
Duluth & Winnipeg, local offices, etc.....	1,000

Total..... \$687,500

TOTALS.

	No.	Amount.
Eastern divisions.....	323	\$ 921,740
Western divisions.....	357	1,351,850
Suburban divisions.....	193	621,525
Docks and warehouses.....	12	283,800
Elevator companies.....	11	40,000
Duluth Street Railway.....	..	48,000
Railroads.....	11	674,500
Miscellaneous.....	..	100,000
Total private improvements:.....	906	\$4,064,415
Public improvements.		\$ 848,000
Grand total.....		\$4,854,415

Dwellings and Business Blocks. The record of private improvements is no less gratifying than those of a public character. When the vast improvements of 1887 are considered, it seems almost incredible that so large an additional amount should be made in 1888, a year throughout the country and the entire business world noted for its extraordinary dullness and lifelessness. But the Zenith City as though conscious of her great destiny, has swept aside the obstructions

that would have paralyzed activity in most cities, and has marched with steady step and unvexed energies to greater achievement and more astonishing results. The figures given tell best the story of the year, and are their own best commentary. Among the private improvements are noted nine of \$30,000; four of \$40,000; four of \$50,000; two of \$65,000; two of \$75,000; two of \$90,000; and two each of \$125,000, \$150,000, \$175,000, \$250,000 and \$300,000. The total number of buildings erected during the year is 680, many of them splendid structures of solid brick and stone, among them the Dickerman block, the Wheeler block, the Oppel block, the new city hall, the Franklin and Lincoln school buildings, and many others, both beautiful in architectural design and finish and substantial and commodious. The following is a recapitulation of building improvements, which is a summary of the results of a careful and thorough canvass of the city by a force of News' representatives. Every house built, its location and value was noted, and a detailed statement published in the holiday edition of The Duluth Daily News:

EAST.

	No.	Amount.
Michigan street.....	2	\$ 28,900
Lake avenue south.....	34	83,550
Lake avenue north.....	5	34,900
St. Croix avenue.....	14	15,350
First ".....	9	11,600
Second ".....	3	2,600
Third ".....	5	5,700
Fourth ".....	4	8,250
Fifth ".....	4	5,050
Sixth ".....	1	2,500
Seventh ".....	4	5,615
Eighth ".....	4	4,100
Ninth ".....	13	46,850
Twelfth ".....	3	4,500
Fourteenth ".....	1	8,500
Pennsylvania avenue.....	2	8,000
Maryland avenue.....	4	18,000
South street.....	7	5,300
Jefferson street.....	3	6,000
Center ".....	2	3,400
Superior ".....	19	133,225
Bench ".....	10	80,500
First ".....	10	30,500
Second ".....	19	91,000
Third ".....	31	99,800
Fourth ".....	22	50,100
Fifth ".....	17	27,300
Sixth ".....	14	8,950
Seventh ".....	7	62,100
Eighth ".....	13	8,950
Ninth ".....	15	7,450
Tenth ".....	6	4,000
Eleventh ".....	2	1,300
Twelfth ".....	3	400
Thirteenth ".....	2	1,500
Scattered improvements.....	9	6,000
Totals.....	323	\$921,740

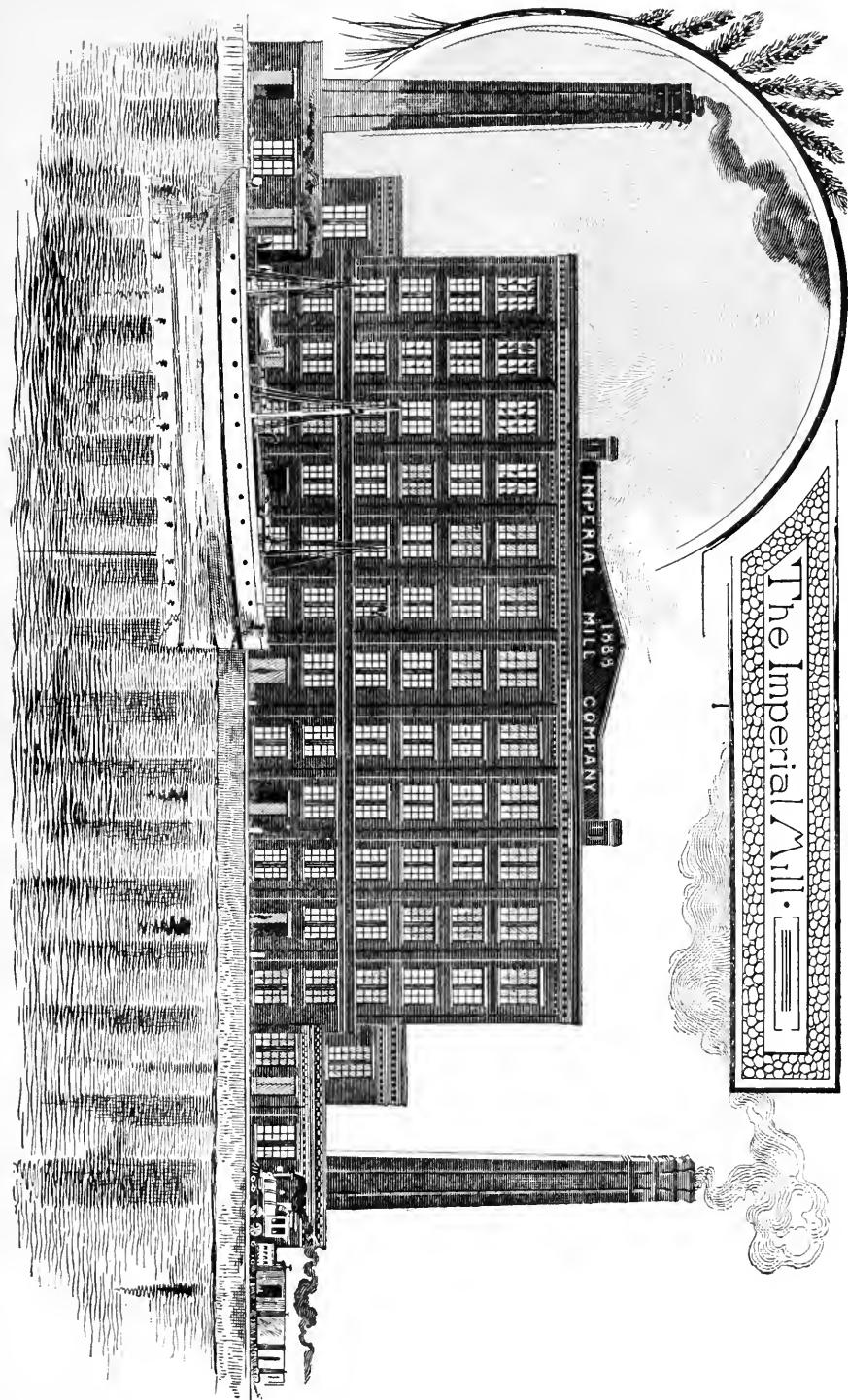
WEST.

	No.	Amount.
First avenue.....	8	\$ 18,450
Second ".....	8	39,200
Fourth ".....	1	500
Fifth ".....	4	6,300
Sixth ".....	5	5,400
Seventh ".....	8	20,700
Ninth ".....	1	1,200
Eleventh ".....	6	8,000
Twelfth ".....	1	1,000
Fifteenth avenue.....	1	7,000
Park avenue.....	3	2,100
Seventeenth and one half avenue.....	2	1,050
Eighteenth avenue.....	3	5,800
Eighteenth and one half avenue.....	3	3,400
Nineteenth avenue.....	4	4,500
Twenty-fifth ".....	6	9,500
Twenty-first ".....	2	3,500
Twenty-fourth ".....	2	2,400
Twenty-fifth ".....	2	700
Pleasant ".....	9	27,400
Rice's Point ".....	23	93,450
Michigan street.....	24	150,350
Superior ".....	58	612,100
First ".....	17	56,800
Second ".....	26	63,850
Third ".....	31	110,900
Fourth ".....	12	27,100
Fifth ".....	2	4,900
Eighth ".....	3	4,400
Ninth ".....	7	3,000
Commerce ".....	6	3,000
Railroad ".....	7	19,500
Huron ".....	2	1,500
Heim ".....	11	8,300
Scattered improvements.....	49	24,500
Totals.....	357	\$1,351,850

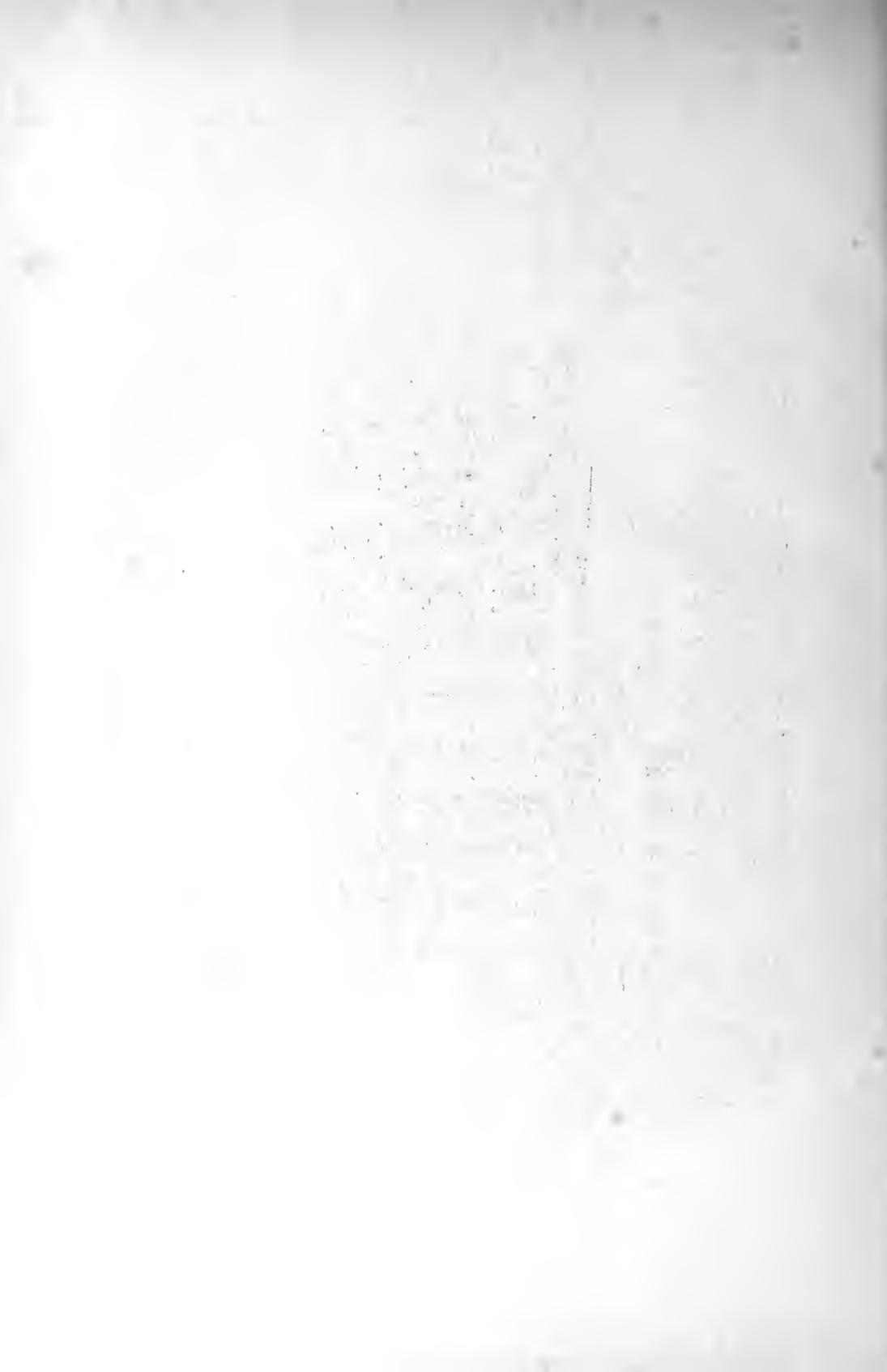
SUBURBAN.

	No.	Amount.
Lester Park and river.....	5	\$ 21,400
New Nondon.....	29	64,200
West Duluth, West End, Grassy Point, Oneota.....	149	512,100
Park Point.....	14	23,825
Totals.....	197	\$621,525

The extraordinary activity, the large amount of skilled and common labor employed to produce these magnificent results, one who was not a witness to it can scarcely imagine. The ring of the hammer and trowel from early morn to late at night, filled the air with their gladsome sound. Teams by the hundred were employed in carrying lumber and nails, brick and lime, and all the materials used in construction. Carpenters and masons, painters and plasterers, plumbers and gas-fitters, and laborers of all kinds, could not be had in sufficient number to do the work required of them. Rush and hurry as they did, however, all the work planned for could not be accomplished, and now, in midwinter, hundreds of carpenters are at work all over the city, and much work is being held till spring.



The Imperial Mill

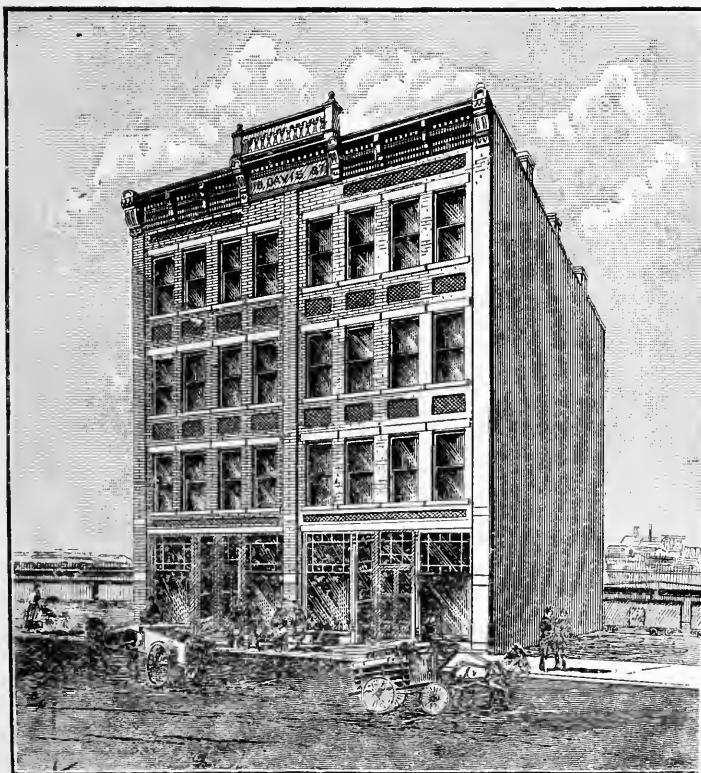


Duluth as a Milling Center.

WHEN in its issue of 1888 The Duluth Daily News Annual predicted that Duluth was destined to become the great flour milling center of the country, it hardly expected to see, within six months from the date of that issue, so much accomplished look-

establishment here of large milling interests. He was met by Duluth citizens with that same spirit of enterprising cordiality that welcomes all legitimate undertakings, and the Duluth Imperial Mill company, with a capital stock of \$200,000 was formed with R. S. Munger as president, T. A.

Olmsted vice president, B. C. Church secretary and general manager, and H. M. Peyton treasurer. It was determined to erect at once a large mill, whose capacity, when complete should be 10,000 barrels of flour per day. A site was secured on Rice's Point, and work at once begun. It was decided that but one-half of the mill be completed at once and work was vigorously begun. At the time of writing the massive walls of the handsome mill, shown elsewhere in this book are up, and



THE DAVIS BUILDING.

ing to its realization. Early in the season Mr. B. C. Church an experienced miller from Sterling, Ill., came to Duluth, and after a careful investigation, decided that all the circumstances justified the

it is expected the mill will be ready for operation early in the season of 1889.

Thus has begun the work that shall not cease until Duluth becomes the greatest flour manufacturing city of the country.

Everything points to this. Lying within easy distance of the great wheat fields of Dakota, the recognized primary wheat market of the country, her facilities for the cheap handling of the product of the mills are unexcelled. A mill located on the water front at Duluth has its wheat delivered at one door with no charge for switching, while the flour is rolled out another door, without expense for cartage, directly into the hold of a great steamer which has brought coal enough in one trip to run a half-dozen of the largest mills in the world for an entire year. In October, 1888, E. D. Church & Co., of Sterling, Ill., practical millers, leased the Duluth Roller Mill at the foot of Seventh avenue west, and at once began the manufacture of flour. Their experience thus far has been most satisfactory, and they consider the outlook for the future very promising. The capacity of this mill is something over 200 barrels per day, and the growing demand for its product will soon command all it can manufacture.

Minneapolis is known as the Flour City; each year that city ships many thousands of barrels of flour to the East via Duluth, in order to get the benefit of cheap water

transportation. Here is the record of the past eighteen years:

Year.	Barrels.
1871.....	164,100
1872.....	119,600
1873.....	139,000
1874.....	287,400
1875.....	259,100
1876.....	354,200
1877.....	345,500
1878.....	353,400
1879.....	511,000
1880.....	551,800
1881.....	625,800
1882.....	353,600
1883.....	791,800
1884.....	815,300
1885.....	1,155,000
1886.....	1,500,000
1887.....	1,335,900
1888.....	1,428,707

The cost to the Minneapolis miller on every barrel of flour shipped from his mill and laid down in the warehouse at Duluth is not less than fifteen cents. Since and including 1871, Minneapolis flour manufacturers have shipped via Duluth 11,088,307 barrels of flour. At the low estimate of fifteen cents per barrel, it is seen that the additional cost to the millers, from this one source alone over what it would have been had the flour been manufactured at Duluth, is \$1,663,246. No one can read these figures without becoming convinced that Duluth will soon take the lead among the flour manufacturing cities of the world.



Banks and Banking.

DULUTH without her banks and bankers would be like the play of Hamlet with the erratic prince left out. Brains may do wonders, and brawn command the admiration of the world, but neither, or both, can build up a great city nor develop surrounding natural resources. But add to brain and brawn the mystic influence of capital, and, presto! forests are leveled, mountains are moved, and cities spring up where yesterday was a wilderness. To her banks Duluth owes much, and it may safely be stated that in no city in the country exists a more cordial feeling of mutuality between banker and customer than here.

The history of banking in Duluth is like a fairy tale. So quickly has it grown to great proportions from humble beginnings that it would seem that the traditional magic wand must have had some part in producing such results. In 1882 the total bank transactions footed up only \$87,398.372; two years later this sum was increased to \$156,296.781, and in 1886 reached the almost incredible figure of \$421,494,791, a larger total, probably, than was shown by any city of four times its population.

At the close of 1886 there were four banking institutions in Duluth, representing an aggregate capital of \$600,000, with \$218,730 of undivided profits and surplus. There are at the close of 1888 nine banking establishments, representing an aggregate capital of \$1,994,307.

The Duluth National and Union National banks consolidated February 1, 1888, under the name of the Duluth Union National bank, and this great institution, with a capital of \$800,000, occupies the handsome structure at the corner of Superior street and Third avenue west, which is shown on Page 65 of this work. At the close of its first fiscal year, in May 1887, the State Bank doubled its capital, making it \$100,-

000. About February 1, 1889, the doors of the National Bank of Commerce will be opened for business. This bank will occupy the elegant banking quarters especially arranged in the Spalding House, at the corner of Superior street and Fifth avenue west. Its capital is \$100,000. These are the changes and additions for the year just closed.

Following is a list of Duluth banks, together with the amount of capital, surplus and deposits:

Banks.	Capital.	Surplus and undivided Profits.	Deposits.
American Exchange.....	\$300,000	\$183,826	\$1,034,127
Bell & Eyster.....	100,000	30,000	\$600,000
H. H. Hell & Co. (.....	.....	.....	75,000
Duluth Union National	800,000	86,211	1,249,765
Merchant's National...	200,000	30,000	325,000
Paine & Lardner.....	50,000	9,000	90,000
State Bank.....	100,000	25,000	205,000
Hall & Co.	22,000	4,870	42,382
Stewart & Britt's	50,000	3,400	26,500
Total.....	\$1,622,000	\$372,307	\$3,647,774

An important addition to the financial institutions of Duluth is the American Loan & Trust company organized early in the year, with a capital stock of \$5,000,000. This company has a guarantee deposit of \$200,000 with the state auditor, which is an assurance of its strength and safety. Its officers are, Dell Noblitt of Philadelphia, president; Chas. E. Shannon, Duluth, vice president; James Billings, Duluth, secretary, and George W. Elder, Duluth, attorney, with a board of directors composed of staunch, conservative business men.

The Northwestern Land and Loan company organized in August, 1888, with an authorized capital stock of \$250,000. Of this company D. M. Irwin, of Oswego, N. Y., is president; R. S. Sloan, of Oswego, vice president, and W. B. Silvey, of Duluth, secretary and treasurer.

On every hand are seen the signs of the future greatness of Duluth as a financial

center. Besides the institutions organized to carry on this business, hundreds of thousands of dollars are annually sent to private individuals in Duluth for the purpose of loaning on the splendid security offered by Duluth real estate. More than this, gentlemen representing vast wealth have made Duluth their home, and are expending and loaning large sums. For many years Duluth found it difficult to secure the money required to carry out the enterprises of her progressive people. To-day the money-lenders stand willing and anxious to place their loans here. Such a condition of affairs—such a brilliant record of a single year's business, surely point to the financial supremacy of the Zenith City.

The Duluth Clearing House. Although Duluth's banking business is largely influenced by the grain trade, and this has been very discouraging during the past year, the increase in other lines of business has served to keep the actual amount of banking business pretty well up to that of 1887. In ten months of that year the total amount of bank clearances amounted to \$105,060,297. The twelve months of 1888 show total clearings of \$100,625,298, a decrease, of course, but not so

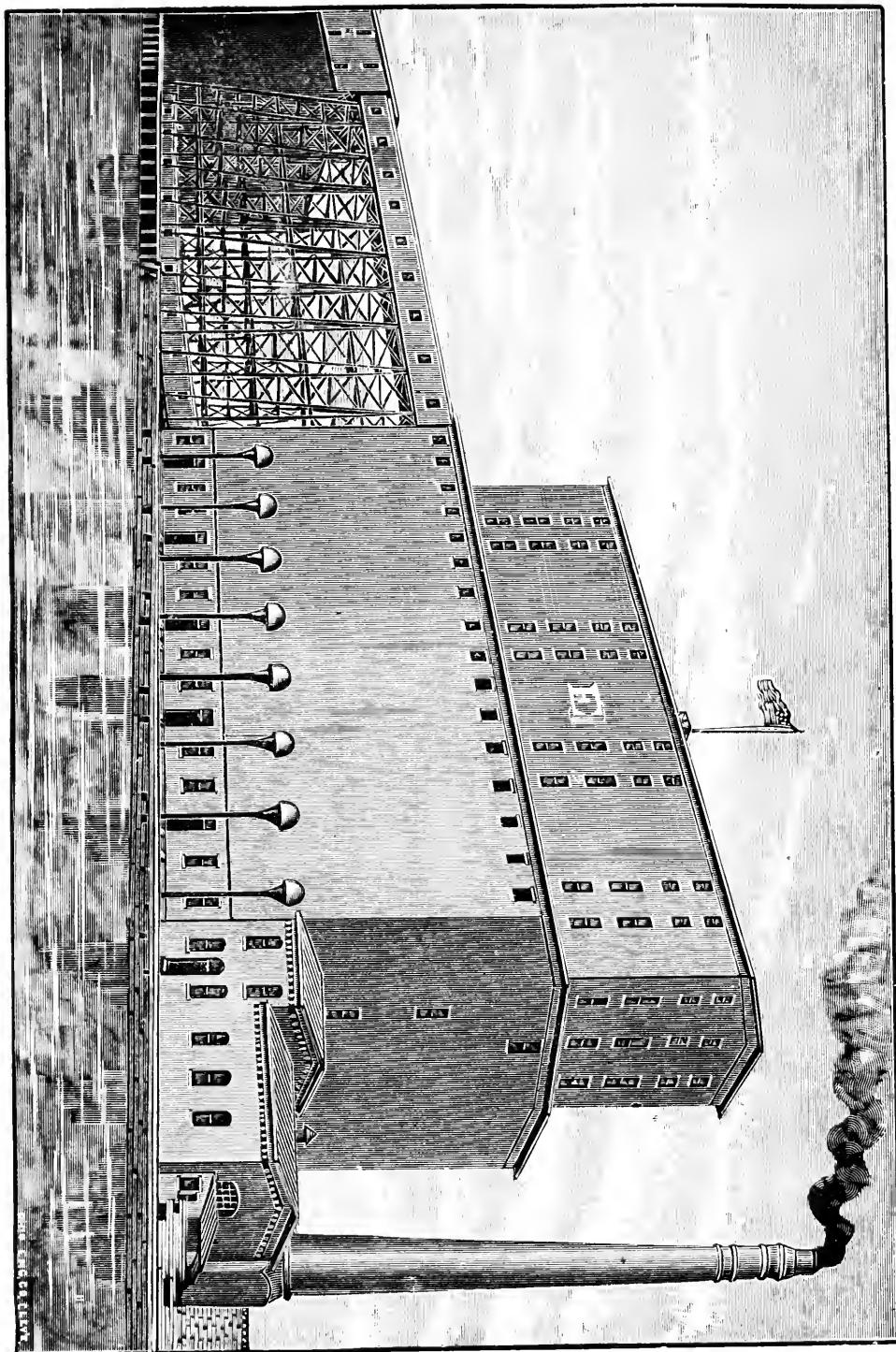
great as the changed condition of the wheat trade would seem to warrant. The clearings by months in 1888 were as follows, the fractional dollars being omitted:

January.....	\$5,168,578
February.....	4,891,902
March.....	5,382,393
April.....	6,137,363
May.....	9,125,260
June.....	3,727,448
July.....	9,810,247
August.....	13,101,698
September.....	9,646,591
October.....	11,521,392
November.....	8,449,116
December.....	8,763,465

Total..... \$100,625,298

In the issue of Bradstreet's of December 8, 1888, a statement is made of the clearings of the country for the first eleven months of the year. By that Duluth stands twenty-third, and her clearings exceed those of Hartford, Conn., the great financial and insurance center, by \$10,000,000, Indianapolis by \$4,000,000, St. Joseph by \$40,000,000 and Richmond, Va., by \$11,500,000, while they are nearly double those of Springfield and Worcester, Mass., Portland, Me., and Galveston, Tex., and they are three times those of Lowell, Mass., which has a population of 75,000, and nearly four times those of Grand Rapids, Mich., a city twice the size of Duluth, a statement which needs no comment.





ELEVATOR E, UNION IMPROVEMENT AND ELEVATOR COMPANY.



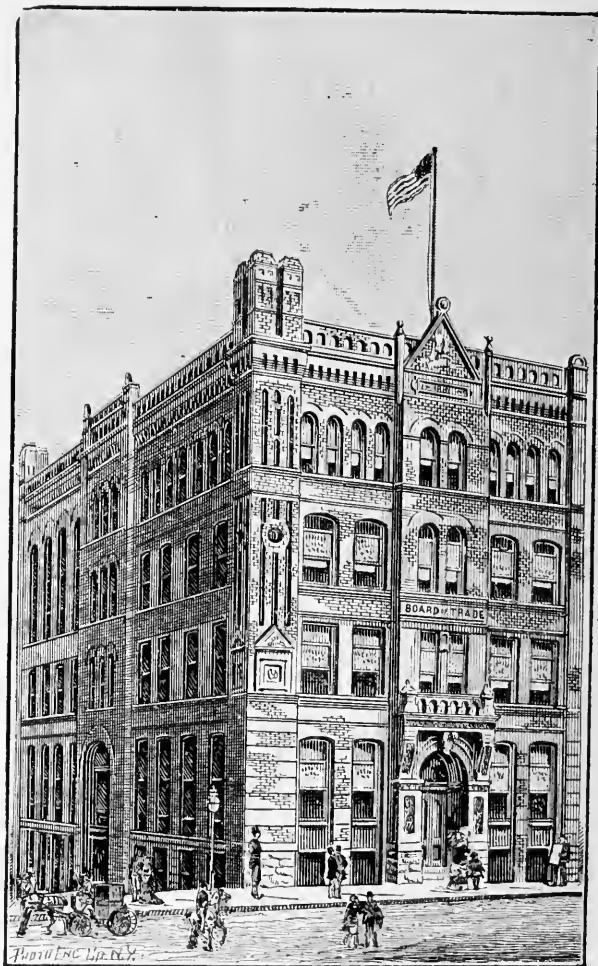
The Grain Trade.

THE wheat business of Duluth is one of its chief glories. In the course of a very few years it has grown from an insignificant position to one of the three or four principal primary markets in the United States, and its elevator capacity, increased to meet the demands of this business, is now over 20,000,000 bushels where in 1880 it was but 600,000 bushels, while the Duluth elevator system itself is, without any exception, the finest in the world. Duluth's wheat territory comprises the famous No. 1 Hard districts of the Northwest, included in the Red River valley, Northern Dakota, Southwestern and Western Minnesota, and Southeastern Dakota. This territory, the future granary, as it were, of the United States, produced in 1888 about eighty million bushels and in 1887 about one hundred million bushels. The yield last year was cut down by bad weather and unusually early frosts, which spoiled thousands of acres of the growing grain in Northern Minnesota and Dakota, regions which ship the bulk of their crop, in ordinary years, to Duluth. The grain country of Minnesota and Dakota is mostly tributary to both Duluth and Minneapolis, while the more southern districts also ship to Winona, Rochester, Red Wing, La Crosse, and other large interior milling points, and to Milwaukee and Chicago. Minneapolis with her immense milling capacity is our chief competitor. To supply all the mills at that city from thirty to forty million bushels are annually required, and for the mills in other places at least ten millions more. These milling towns take all grades of wheat, and are the best markets for off grades because there sample markets are established, millers paying the value of the wheat without regard to the arbitrary grades established by state inspection. Duluth, on the other hand, has been a graded wheat market, all sales

being made according to state grades, and the trading is nearly all carried on by board of trade sales. Duluth depends for her market almost exclusively upon the eastern milling and foreign demand, which is for contract grades. The only contract grade here is No. 1 hard and the character of her trade makes this the easiest grade handled here, as it is the favorite with all millers, and so Duluth has become known as the highest grade market in the world—the leading No. 1 hard wheat market. Other high grades are also sold to the greatest advantage here, while lower grades are disposed of to better advantage where there are mills and sample markets. In the distribution of the wheat yield of the Northwest, as an ordinary thing, the demand first to be supplied is the local milling demand and that of Minneapolis and of the other milling centers in Minnesota. The surplus above this and the seedling demand is distributed to the markets of the South, East and Europe through Duluth, Minneapolis, Milwaukee and Chicago. For this surplus, ordinarily from thirty-five to fifty million bushels, Duluth is the natural market for all the territory north of Central Minnesota and a competing market for Southwestern Minnesota and Dakota, and such is her position that she usually controls the bulk of the wheat shipped from these sections. In years of full crops Minneapolis supplies her mills with wheat from territory near by. When crops are short she must reach out into Duluth's territory. This has been the case the last two years. She profits also at Duluth's expense when there is, on account of blight or frosts, a large amount of low grade wheat, for she can use to advantage wheat that cannot find a market here on account of the high character of the Duluth market. In the crop year of 1887-8, with a yield of about one hundred million bushels in the North-

west, there was a surplus of about thirty million bushels for shipment East and abroad. Of this amount Duluth, with many disadvantages to contend with, received 17,673,414 bushels. For the present crop year the surplus will be only about one-half that much and Duluth's receipts will therefore be largely decreased. This is already shown by the great falling off for the last calendar year and for the first four months of the crop year. With a falling off in the yield of the Northwest in 1888 of twenty million or more from 1887, Duluth dropped in receipts about nine millions; practically a large loss, but comparatively no loss at all. Receipts are now running low, as there is not wheat in the country to ship either here or elsewhere. The crop of the Northwest in 1888 was about 60 per cent No. 1 hard. Duluth's receipts for 1888 ran about 75 per cent No. 1 hard and are now averaging fully 85 per cent, while at Minneapolis the average is less than 50 per cent. With a full crop next year, Duluth must handle more wheat than ever before, for she is better equipped in regard to elevators and her railroads cover a larger territory. The wheat territory of the Northwest is constantly increasing and, producing as it does the best wheat in the world, must become the great granary of the world, and Duluth will handle the bulk of all this wheat. The Duluth market will change its character somewhat during the present and succeeding year. The first large flour mill will start up with a capacity of 1,500 barrels daily, which will be increased to 10,000 barrels in a very short time, and Duluth will take her place as a milling center and will then furnish a market for all grades of

wheat and make this a sample market. Another new feature which will increase the receipts of wheat here is the opening up to American railways, and especially Duluth roads, of Manitoba and the marketing by way of this city of a large share of the wheat crop of that province.



BOARD OF TRADE.

Duluth now is the second largest primary wheat market in the country, only Minneapolis leading her. Duluth handles much more wheat annually than Chicago, though the latter is both a spring and winter wheat market.

The receipts and shipments for 1888 were as follows:

MONTH.	Receipts, bushels.	Ship- ments, bushels.
January.....	302,692	15,558
February.....	99,730	15,210
March.....	812,753	16,765
April.....	1,203,185	11,980
May.....	508,118	3,983,081
June.....	952,702	1,582,900
July.....	420,086	2,666,170
August.....	739,108	2,283,560
September.....	957,244	1,339,935
October.....	744,422	578,667
November.....	648,199	985,756
December.....	520,756	162,531
Total.....	7,962,301	18,642,116

While the falling off in receipts affected the business on the board of trade to a large extent, there was fairly good trading for a good part of the year, and the range of prices was the greatest for years. This, of course, was due to the small crop and small stocks of wheat in the country, causing a heavy advance from values of early months. The range of prices of spot wheat by months was as follows:

January.....	.75 1/2 @ .78	July.....	.80 1/2 @ .86
February.....	.75 @ .77 1/2	August.....	.86 1/2 @ .99
March.....	.74 1/2 @ .77 1/2	September.....	.95 1/2 @ 1.13
April.....	.74 @ .82	October.....	1.12 1/2 @ 1.32
May.....	.80 @ .89	November.....	1.16 1/4 @ 1.25
June.....	.79 1/2 @ .84 1/2	December.....	1.20 @ 1.24

The highest price, \$1.32, was paid on the

26th, 27th and 29th of October, and the lowest, 74 cents, on April 5. The May option ranged from 75 cents, on April 5, to \$1.35 1/2 on the 29th of October. For several weeks during the last of the shipping season cash No. 1 hard was worth more than the near future. Coarse grain receipts and shipments during the year were as follows:

GRAIN.	Receipts, bushels.	Shipt's, bushels.
Corn.....	937,639	441,806
Oats.....	46,964	66,343
Barley.....	34,062	34,062

The receipts and shipments of flour for the past year show an increase over 1887 of nearly 400,000 barrels. Receipts were brought here by the St. Paul & Duluth, Northern Pacific, Chicago, St. Paul, Minneapolis & Omaha and Eastern Minnesota railways. The records of the year and of 1887 were as follows:

YEAR.	Receipts.	Shipt's.
1888.....	1,747,746	1,746,048
1887.....	1,335,982	1,322,725

The flour receipts for 1889 were equal to about 8,500,000 bushels of wheat.



Social Features.

BUSY young Duluth has little time for frivolities. Nevertheless in the labor of building a city social activities are not forgotten. Society has not had time or leisure to develop the clubman or the professional beauty, but there are clubs and there are many beautiful women. The Kitchi Gammi is the principal social club, occupying luxurious rooms in the Opera House block. Its annual reception is always an event of the season. An institution rather more popular is the

ings, and germans, hops, card parties, receptions and lunches are without number.

Music and drama center about the Grand Opera House, one of the prettiest auditoriums in the United States. Here such attractions as the Boston Ideals, the Bostonians, Juch, Aus der Ohe, Booth and Barrett attract crowded houses, with all the spectaculars, comedies and minstrels one could desire. Amateur theatricals, concerts, operas and various charitable entertainments must of course be added.

There is a musical element in Duluth remarkably strong, which has done much good work, and is capable of much better with proper organization. A long list could be made of amateur vocalists and instrumentalists whose home is here.

There are many organizations which mix with benevolent, religious, educational, industrial or national purposes, attractive social features. Such are the Chataqua Circles and Debating clubs, Shakespeare and Musical clubs; the various secret orders, Masons, Odd Fellows, Knights of Pythias and so on; Clan Stewart who eat haggis once a year, the Union Jacks who have imported cricket and other mysteries, the Turn Verein, St. Jean Baptiste, Polish, Scandinavian and other societies. Organizations for out-door sports and in-door games of every description grow and flourish. Duluth society may not be highly differentiated but it is thoroughly charming and brings together in a hundred ways the brave men and fair women of a bright, intelligent populace.



RESIDENCE OF E. P. ALEXANDER, JR.

Duluth Boat Club, owning a cosy and attractive house and a fine fleet of pleasure boats and shells. The Boat Club also can entertain royally. Every winter several assembly clubs dance away the long even-

FRANKLIN SCHOOL

PELTER & HALL
Archts



Lincoln School



Educational Interests.

DULUTH'S educational interests center in the public school system which yields precedence to none. The buildings are model and modern, the teachers capable and the pupils apt, and the best methods of the nineteenth century art of pedagogics are carried out with the thoroughness of the old dame schools. As for numbers the total enrollment last year was 2,400, the buildings nine, to which two will be added this year. The seating capacity of these eleven buildings will be 2,800 which will all be needed before the year is out. Four hundred pupils attended evening schools last

increase this by \$100,000. The faculty includes fifty-three teachers for the day schools, four for the evening schools, the superintendent and special instructors in music and drawing. Last year's pay roll amounted to \$33,914.65.

The range of subjects is wide, embracing everything from the very elements to the highest branches that may be properly taught in an academy. Something more than book knowledge is taught. The primary scholars learn form and size and dexterity by modeling in clay and the high school is equipped with serviceable physical and chemical laboratories. Another year a workshop will probably be added. Moreover the pupils are encouraged to the independent use of books that develops scholars. The lower schools have their libraries partly fixed and partly circulating from school to school, and the high school has an admirable selection of a thousand volumes of books of reference, history, science, travel and standard literature. Here also is a cabinet for an exhibit in geology and natural history. The membership of the high school is now 130, of which 60 are in the newly entered



TWO OF DULUTH'S SCHOOL BUILDINGS.

year and the number this year will be not less than 500. The buildings are, except two, brick or veneer. The assessed valuation of buildings and grounds is \$241,000, while the two new buildings will

class—a marked increase. A new department is specializing as far as possible the work of the high school teachers.

The results of the system are eminently satisfactory. The pupils leave the lower

schools possessing a sound common school education, while the majority of the graduates have passed successfully to higher studies.

Other institutions are Parsons' Business College having an average attendance of over 100 and an honorable reputation, and the Duluth Yale school a new but well established classical school. Sectarian schools are conducted by the Norwegian and Danish Lutheran, St. Clements, St.

Stanislans, St. Thomas, the Swedish Lutheran and the German churches. One or two smaller private schools may be added to the list. These are of specialists in music, modern languages, art, history, literature and so on beyond cataloguing and classes to correspond. Duluth, truly, is known more in other ways than as a center of education, but her intellectual life is anything but dormant, and promises to be productive of great results.



Fin, Fur and Feather.

GREAT cities like Duluth need nothing more truly than a pleasant resort within convenient distance where each and all may go at any time and exchange the heat and dust and noise and cares of city life for the life-giving relaxation that only the country affords and live with mother nature for longer or shorter time the life she would have us live

"When summer winds blow soft and low."

And Duluth is indeed blessed in this respect. The smoky banners that will wave above the great manufacturing estab-

stream famed in song or story—be it the beautiful Danube or the castled Rhine—discloses more grand, picturesque landscapes than can be enjoyed by a short trip up the St. Louis. And around mysterious, enchanting Spirit Lake, the hand that shaped the rivers, made the islands and the hills, has lingered lovingly and left for man's enjoyment the most beautiful scenes. Until the opening of a summer hotel at Spirit Lake, two miles from West Duluth, and the running of regular and excursion trips by the pleasure steamer Barker the



THE UNITED STATES FISH HATCHERY.—FROM A SKETCH BY DR. R. O. SWEENEY.

lishments at West Duluth, will not mark the western limits of the city of destiny. There is more beyond.

Fame has as yet but modestly introduced to the world the wonderful natural beauties of the winding St. Louis river, its islands, bays and lakes, from its source far up the Iron Range till it at last meets the great inland sea at Duluth's feet. No

past season, but few even here in Duluth knew of the grand natural resort that lies at their very door. Its charming situation, natural beauties of forest and stream no tongue or pen can fittingly describe; no artist's brush can copy the wonderful landscapes of woodland, wave and sky. Spirit Lake is a pleasant stopping place for picnic parties, and there are delightful camping

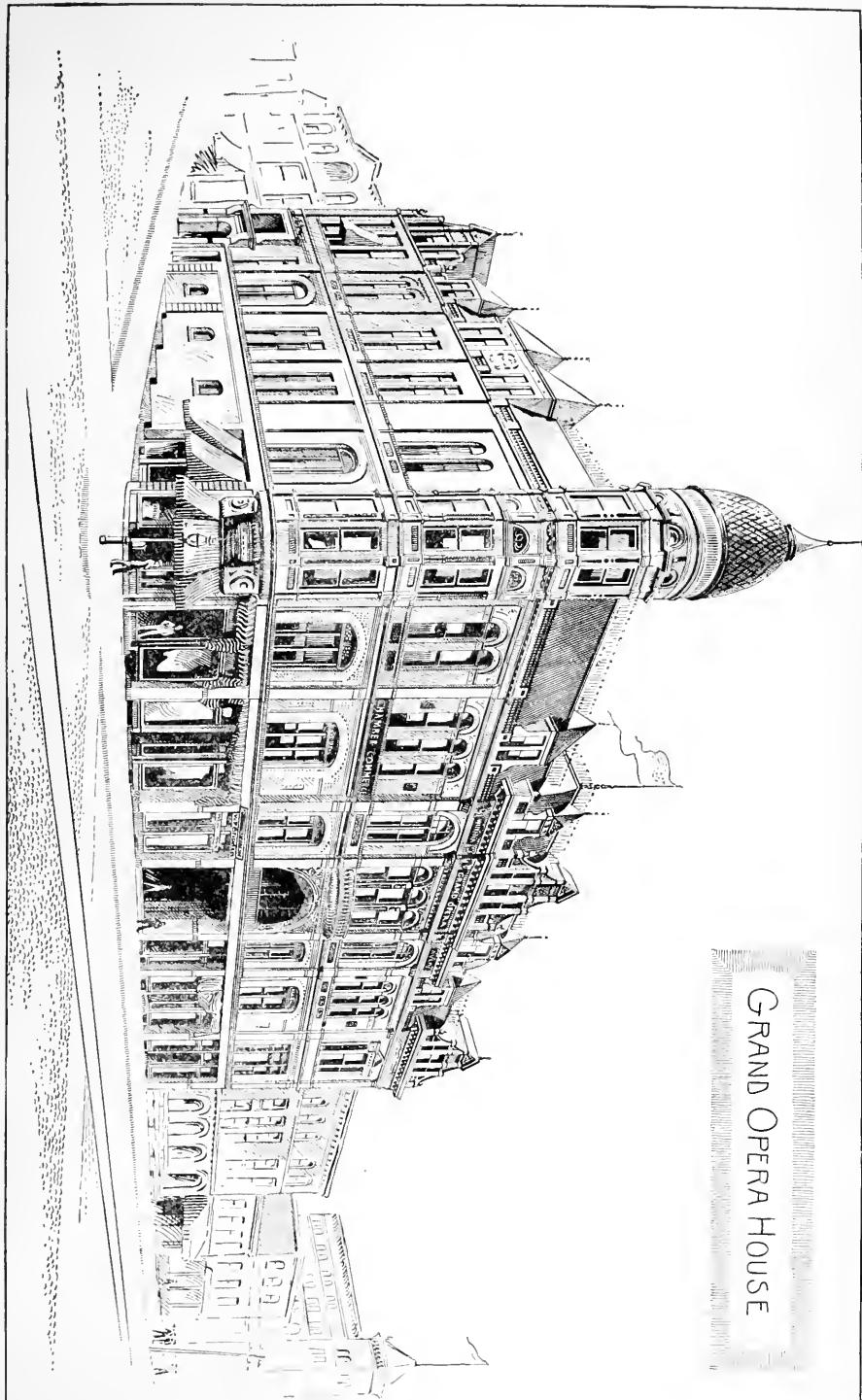
places all along the enchanting shores where all may come and pitch their tents and live the happy life of acadian simplicity through the long summer days, within sight of the city, yet beyond the tiresome whirl of business cares. And here the devotees of the rod and line find sport worthy of their skill. The river swarms with fish the year round. Pike and pickerel are the most numerous, but black bass, the glorious *bon vivant* of the deep, are found in numbers but are hard to catch, the river being so full of their natural food. Cat-fish weighing from one to thirty pounds are caught here, while the smaller varieties of fish are caught in great numbers at all seasons. Here the professional angler or a "worm at one end of a line and a fool at the other" may catch fish until satiated.

From Duluth the famous Brule trout streams are easily reached by boat or rail, and the far famed Nipigon trout waters are but a day's journey by boat from Duluth. The waters are teeming with fish, but that is not all. Spirit Lake is the favorite stopping place for the swarms of ducks, geese and brant on their long journey from the northlands to their winter homes in the land of flowers, and great numbers are shot here. A short ride by rail brings the hunter to billowy plains whose golden grain has gone to fill Duluth's great eleva-

tors or to feed the millions at home and beyond the seas. On the stubble fields of Minnesota and Dakota the goose hunter finds such sport as but few states afford. And to him who would seek larger game Duluth's offerings are still greater. All along the St. Louis and far back into the tangled wildwood deer are still found in great numbers in spite of the rapid advance of the lumberman in the van of civilization and the hunter's remorseless rifle. And he whose woodcraft and skill is equal to the natural instincts of this noble game, may have the proud honor of hanging a magnificent pair of antlers above his hearthstone or spreading a bear skin before it. The famous "big buck country" of Northern Wisconsin is within a two hours ride by boat or rail from Duluth. The caribou and moose are fast disappearing, but Duluth is the starting point from which to follow their trails to the north.

At and around Duluth the naturalist and mineralogist have a field limitless and inexhaustible. The sun shines warm in this northern clime and the flowers are with us from the tiny violet, loved the world over, to the mysterious Egyptian lotus, which is found near Duluth. The shores of the great inland sea give up the most beautiful agates, amethysts and crystals, such as tourists find on no other shores.





GRAND OPERA HOUSE

The Marine Trade.

THE presidents of two of the great railway systems of the country, one in the east and the other in the west, sat talking together a number of years ago. The eastern man spoke of the remarkable and continuous decrease in the net cost of railway transportation owing to improved road beds, tracks and bridges, the increased efficiency of motive power and the great increase in the relative proportion of carrying capacity to dead weight in rolling stock and confidently expressed the opinion that this reduction would continue until the railroads, carrying freight at the same cost and at greater speed, would drive the steamboats out of business. The western man agreed with him at the time, but in speaking of the matter recently, said: "I might have been of the same opinion still if I had not had occasion since then to build and operate some boats myself. Our appreciation of the improvements in railway service was none to high, but we failed to foresee that the increase in the efficiency and carrying capacity of lake steamers would be still greater. The best boats on the lakes today have triple expansion engines and can make the trip from Duluth to Buffalo in three days and a half carrying 90,000 bushels of wheat. The actual cost of running one of these boats, including everything, is \$120 per day. This means that wheat can be carried from Duluth to Buffalo if necessary, for one half a cent per bushel and leave a trifling margin of profit. Railroads cannot carry freight for such prices, and what is more, under existing conditions, it is impossible to send a freight train over the road at the average rate of speed—fourteen miles an hour—maintained by these boats. Instead of the railroads driving steamships out of business, if a few more improvements are made in the latter, the railroad is apt to be abandoned as a

method of transporting freight where steamships are available, because it is at once too costly and too slow."

The observation of the western railroad president is justified by the events of the past year. The improvement in shipping facilities is illustrated in the fact that while the number of arrivals and clearances at this port for 1888 were less than in 1887, the tonnage is just about the same. Larger, better, faster vessels are being built every year, and many of the craft that now steam in and out of Duluth harbor would compare favorably with ocean steamships.

Vessel building was active in 1888. Between spring and fall seventy-four new vessels went into commission, making the increased tonnage about ninety thousand, a large part of which was for Lake Superior business. The splendid steel steamships of the Northern Transportation company, four of which are now complete and eight more to come, would do credit to the ocean traffic, and in their completeness, convenience and economy of arrangement they have no superiors in the world. A view of one of these magnificent ships is shown in the illustration on Page 65.

The number of arrivals and clearances for the season of 1888 was 2,200 and the tonnage amounted to 1,943,236. The average tonnage of the boats running to and from Duluth was 887. In 1885 the average was 761, an increase of 126 since that time. The value of domestic exports which passed through Duluth harbor for 1888 was \$1,207,858.

Ship Building at Duluth. For years Capt. Alex Mc Dougall of Duluth has been at work on the models for a steel ship that should revolutionize the carrying trade of the great lakes. In the winter of 1887-8, he began work upon the first boat built on his models, and on June 23, 1888, launched the craft whose pennant

rose as she touched the waters of the bay, bearing the name "101". The model of the boat is peculiar and rather demoralizing to one's ideas of "stately ship that ride seas." It is simply a long hull with a flat bottom, the sides curving upward and forming almost a circle, the "top" of the boat being merely a "turtle back," and having no deck whatever. Each end of the hull tapers off in such curves that a very small "nose," almost circular is shown. When loaded to her water line, only four and one half feet of the curved back appears above the water. Resting on this back are two cylindrical turrets which support a small deck and pilot house. This deck is seven and one half feet above the back. The dimensions of the barge are 187 feet overall, 25 in beam and 18 in depth. She is constructed of 350 tons of steel and 25 tons of nuts and bolts. Her cost is about \$40,000, and her carrying capacity is 1,000 gross tons on a draught of 12½ feet. In the words of Capt. J. J. Reardon, insurance inspector from Chicago, the boat is the strongest that has ever been made on the lakes. He was immensely surprised when he examined her and found that she classed A 1. Nothing can break her, nothing can sink her. She has steel frames twenty inches apart through her whole length. The plating is $\frac{1}{2}$ inches thick above and $\frac{1}{4}$ inch below, and is double riveted, except at the butts, where it is four riveted. The "101" went immediately into commission, and her success in fair weather and foul has been a source of astonishment to navigators on all the lakes.

Capt. McDougall has been busily at work interesting capital in his steel barge patents, and the American Steel Barge Company has been formed in New York with a capital stock of \$500,000, with the following incorporators: Alex. McDougall, Duluth, Colgate Hoyt, of New York; C. L. Colby, of

the Wisconsin Central; Chas. C. Colby, of New York; Pickney F. Green, Charles W. Weiffenback and Robert L. Murray, all prominent moneyed men. The stock is divided into 5,000 shares. The building of the cigar shaped vessel will be carried on rapidly and a large shipyard, fitted with all the appliances for the construction of iron and steel ships, will be the first work of the company, and of this Capt. McDougall's shipyard at Duluth will form a nucleus. The new company has decided to make Duluth the point of construction for the entire fleet. This event marks the be-



RESIDENCE OF E. L. BRADLEY.

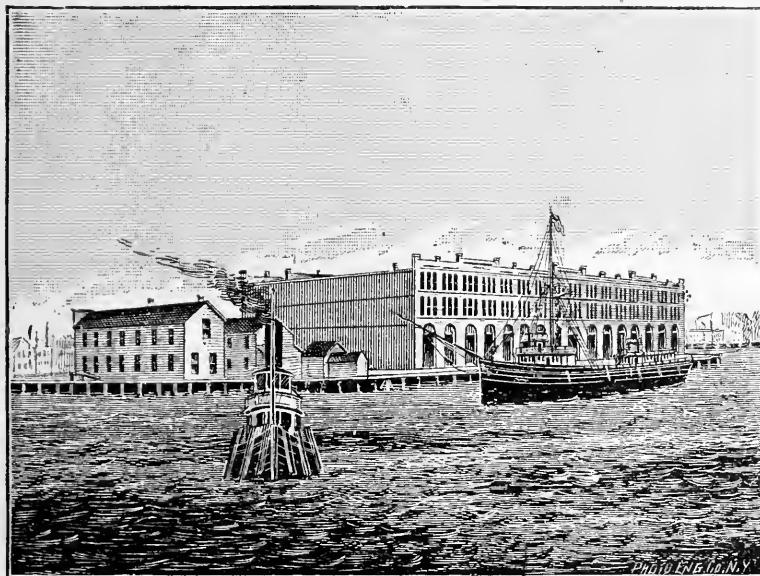
ginning of an era in boat building which will revolutionize marine traffic on lake and sea and which will tend to a still further reduction on our already wonderfully low freight rates. All honor then to the man whose brain and unswerving devotion to his well grounded beliefs will make his name famous the world over. And may he be liberally rewarded with what too seldom comes to the inventor—riches.

The Jobbing Trade.

THE development of Duluth as a great trade center goes rapidly forward. The year just closed was one of unexampled prosperity to the jobbing trade of the city, and gives a cheering promise for the future. The advantages

the next decade this area will develop, perhaps, with greater rapidity than any other section of the country. The jobbing trade of Duluth has now before it a constantly widening field, and the increased trade of 1888 over 1887, which is \$3,243,000 will develop in a steadily growing ratio.

So well have the points which relate to this subject been covered in the article on "Duluth's Railway System" that further reference is here unnecessary. The following table will be interesting as showing the class and amount of the jobbing in Duluth in 1888:



THE MARINE BLOCK.

of cheap water transportation each year become more clear, and Duluth is rapidly encroaching upon the territory heretofore supposed to belong exclusively to the Twin Cities. Added to this is the vast territory lying north and northwest of Duluth which will always be exclusively Duluth territory. This section is rich in mineral, timber and agricultural resources, and is as yet practically untouched. New railroads are penetrating this great area and bringing to market its rich products. Settlers are going in and developing its limitless resources. The demand for groceries, provisions, clothing and all of life's necessities is constantly on the increase. During

CLASS OF TRADE.	No. firms.	Traveling men.	Sales.
Builders' supplies.....	8	..	\$ 413,000
Beer and ales.....	4	4	200,000
Cigars and tobacco.....	8	5	300,000
Coal.....	3	..	3,200,000
Dressed meats.....	3	4	700,000
Fish.....	1	..	85,000
Flour and feed.....	5	5	645,000
Fruits and confectionery.....	5	4	180,000
Furniture.....	2	1	85,000
Glass and putty.....	2	..	120,000
Groceries.....	3	8	1,100,000
Hardware.....	5	4	805,000
Liquors.....	4	7	255,000
Oil.....	1	..	450,000
Produce.....	5	3	470,000
Paper and stationery.....	1	..	15,000
Sash and doors.....	2	..	120,000
Miscellaneous.....	8	3	700,000
Total, 1888.....	70	54	\$10,243,000
Total, 1887.....	..	..	7,000,000

Miscellaneous.

ALREADY The Annual has passed the limit set for it, and still there is much of interest left unsaid. To tell the history of Duluth for a year and point the moral which adorns the tale now requires a volume. The articles "A Great Trade Center" and "Duluth's Railway System" cover the entire range, however, and while many points of interest are omitted because of want of space, the general treatment of the subject, it is believed, will meet the appreciation of its readers.

Ecclesiastical Among these institutions

Institutions. in Duluth which have for their object the care of the sick and suffering, St. Luke's hospital, established and conducted under the auspices of St. Paul's Episcopal church is the oldest. It is located at the corner of Fourth street and Second avenue east. It is under the direct supervision of Miss Scott, matron, and its record is one of which any similar institution might be proud. That St. Luke's is destined at an early day to enjoy larger quarters and more complete facilities is assured. It has a great work before it.

St. Mary's hospital corner of Third street and Twentieth avenue west is conducted by the Benedictine Sisters of St. Joseph, Stearns county, Minn. The hospital is under the supervision of the Sister Superior and in attendance with nine nurses and other necessary help. This establishment dates its existence only since last March when it received its first patient. The building is of red brick, 100x60 feet, four stories high on a stone basement, and has all the modern improvements. It has forty private rooms and can comfortably accommodate 150 patients.

The Temporary Home for Needy Women and Children, located at 1722 Bench street, is owned and conducted by the Duluth Home society. The institution is supported

by gifts of friends, and industry of inmates. Also by money received from the county, for the care of those who would otherwise be at the county house and by board money from those able to pay a small sum, or whose relatives can pay full or partial cost. The estimated current expenses for the year ending October 1st, 1887, were about \$1,200. The number of persons (excluding employes) cared for during the year, were 120, 50 of whom were women, and 70 were children. This home temporarily shelters and provides for poor widows, and such young children as may belong to them; also furnishes a boarding place for women looking for employment and those needing a place to rest from over work; for young girls needing mother's care and instruction; and for orphan children, and infants until otherwise provided for, or adopted. The Home seeks to supply present physical needs not only, but to cheer, encourage and strengthen each adult inmate for future self-help.

Duluth At the readjustment of the postal department in **Postoffice.** July, the Duluth postoffice was made a first class office. The business of the office had greatly increased over that of 1887, making it self-supporting. The net profit to the department for the year's business was \$23,113.41. The following table will give a general idea of the business done:

Receipts from sale of stamps	828,763	42
Receipts from sale of envelopes	11,762	60
Receipts from unpaid letter stamps and periodical stamps	1,277	27
Money orders issued, 11,116: amount with fees on same	113,454	64
Grand total financial transactions	313,822	12
Number of pieces handled by carriers	5,330,862	
Number of pieces delivered through boxes and general delivery	313,804	
Number of pieces-forwarding and dead letter division	30,124	
Number of pieces-registry division	37,016	
Number of pieces of mail handled in transit	672,257	
Number of pouches and tie sacks	36,876	
Total	6,420,939	



— * THE * —

Duluth Daily News.

THE OFFICIAL PAPER OF ST. LOUIS COUNTY.

THE NEWS Is the only paper at the head of Lake Superior *owning and using* an exclusive morning and afternoon press franchise.

THE NEWS Is independent, fearless and reliable—the paper on which the people depend for information regarding the new Northwest.

THE NEWS. Is the only paper in the State, outside of St. Paul and Minneapolis, having an *Eastern Bureau* and special correspondent at Washington, D. C.

THE NEWS Is the only paper in Duluth receiving its telegraph service over its own *special wire*, connecting the office with every prominent city in the United States, and the Mackay-Bennett cable.

THE WEEKLY NEWS. The Weekly News contains a complete resume of the week's doings, especially that relating to Duluth.
(LAKE SUPERIOR NEWS) Also, a complete list of the real estate transfers for each week, and all the special features of the Daily.

TO ADVERTISERS.

The country tributary to Duluth is adding thousands to its population each year. The News reaches out to every city, town, or village in this section. If you want to reach this territory, no advertisement is more sure to bring safe returns than an advertisement in the News. Send for sample copies and rates.

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ESTABLISHED 1885.

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Solicit Correspondence concerning the CARE, PURCHASE, SALE or RENTING of Property.

Our large dealings enable us at all times to offer our patrons desirable investments, as we have for sale "EXCLUSIVELY" the largest list of

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Of any agency in the city, including BUSINESS LOTS in the most desirable locations, MANUFACTURING SITES, with or without water frontage, RESIDENCE LOTS in every part of the City. IMPROVED RESIDENCE PROPERTY whose rental affords a handsome return on the investment. ACRES FOR PLATTING, gardens or farms. We handle property on

• BOTH SIDES OF THE HARBOR. •

We have made large and numerous purchases for parties, many of whom never saw the city.

ALWAYS WITH SATISFACTION, OFTEN WITH VERY LARGE PROFITS.

MORTGAGE LOANS.

We have exceptionally good opportunities to loan money on the most approved security, netting 7 and 8 per cent. Our pecuniary responsibility, added to several years experience in Banking, also in Real Estate here, enable us to do this kind of business for our patrons in a safe and satisfactory manner.

We certainly think that parties interested in INVESTMENTS OR LOANS would do wisely in writing us for information, and we ONLY ASK that those visiting the city should come in and EXAMINE OUR LISTS AND COMPARE PRICES with those of others before purchasing.

Investments Made on Joint Account. Maps Free. Write for Information.

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First Mortgage Loans

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Taxes Paid and Safe Investments Made
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VALUABLE IRON PROPERTIES
on the Vermilion Range.

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City Office, 27 Exchange Bldg.,

Branch Office at West Duluth.

REFERENCES, BY PERMISSION:

Duluth Union National Bank, Duluth; Nels Hall, Capitalist, Duluth; J. H. Triggs, Real Estate, Duluth; Doran & Smith Bankers, Le Sueur, Minn.; Allen, Moon & Co., Wholesale Grocers, and P. H. Kelly Mercantile Company, St. Paul, Minn.

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Brick, Fire Clay, Sewer Pipe, Ameri-
can Soap Stone Finish.

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Office: Rooms 21 and 22 Board of Trade.

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PINE AND MINERAL

LANDS.

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—AND—

Financial Agent.

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Taxes Paid, Loans Negotiated,
Mortgage Notes Bought and Sold.

REFERENCES, BY PERMISSION:

Gen. Thos. Hillhouse, Pres't Metropolitan
Trust Co., New York; American Exchange Na-
tional Bank, New York; Fourth National Bank,
New York; Duluth Union National Bank, Du-
luth; American Exchange Bank, Duluth; Cen-
tral Railroad and Banking Co., Savannah, Ga.

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er, President,) St. Paul, Minn.; First National
Bank, (J. M. Kingman, Esq., cashier,) Chicago,
Ill.; Citizens National Bank, Davenport, Ia.;
Banks (all) Dubuque, Ia.

No. 30 Board of Trade,

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Opera Corner. BOYCE & TOTMAN. BRANCH, 127 Tenth Avenue East.

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On 25 to 40 per cent valuation of Improved City Property in Duluth and West Superior. Every precaution taken and only Gilt Edge Mortgages Sold.

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A large list of Business and Residence Lots in all parts of the City, and Acreage adjoining at inside prices.

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WE have the choicest acres at the head of the lake, both at the West and East end of Duluth and on the hill. We have the largest list of the very best property for platting. We are the exclusive agents for most of this property, and can sell it at bottom prices.

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We also have a large list of low priced acre property, particularly at the West End. Nothing will make a larger percentage of advance.

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We have the best corners on Superior street, between 5th ave. east, and 28th ave. west, and the very best corners on First street. We also have some of the choicest improved Superior street property.

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On January 1st we will place on the market lots in Bell's Addition, which is located on the hill, one mile from Spalding Hotel. The best lots will be sold for \$250, one-third cash.

We will also sell a few lots in Triggs & Kennedy's Bay Front Division at \$500, one quarter cash. This addition lies in the west end of the city, on the shore of the Bay.

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We can sell lots in Merchants' Park for \$250 each, one-fourth cash, balance in one, two and three years. The division is at the West End. Well cleared and lies nicely. There's money in these lots.

Lots in Harrington's Addition are selling for \$475, $\frac{1}{2}$ cash, balance one and two years. This addition joins Oneota on the east, is cleared; no waste lots, and is cheap property.

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Choice lots at \$150 each, $\frac{1}{2}$ cash, one, two and three years on balance. Near city, and lies nicely. Well cleared. Platted topographically.

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DULUTH, MINN.

REFERENCES. 1887-8:

	COST.
City Hall.....	\$40,000
F. E. Kennedy, flats.....	25,000
Mrs. D. McDougal, residence.....	11,000
W. P. Heimbach, residence.....	9,000
Stack and Engine House Elevator H, Duluth.....	6,000
G. G. Hartley, residence.....	50,000
Ray T. Lewis, tenement.....	12,000
Allen & Parkhurst, stores.....	6,000
Stacks and Engine Houses Duluth Elevator Co., West Superior.	10,000



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MARQUETTE, MICH.

CHAS. McMILLEN.

E. S. STEBBINS.

McMillen & Stebbins,
Architects and
Superintendents.

REFERENCES:

Well's Terrace,
W. E. Lucas, double brick house,
M. Norris, double brick house,
E. C. Filley, double brick house,
Major Upham, residence,
W. Van Brunt, residence.
H. B. Moore, residence,
R. N. Marble, residence,
J. G. Williams, residence,
Henry Nolte, residence,
H. DeWitt, residence,
R. C. Ray, residence,
High School Building,
Proposed Masonic Temple, Duluth, Minn.,
J. D. Ensign, residence,
Adams School,
Monroe School,
Jackson School.

Room 44 Exchange Bldg., DULUTH.

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Money loaned at 8 per cent net to the investor, on first class real estate security. No chances for loss. Write for particulars.

REFERENCES: Duluth Union National Bank, Duluth, Minn.; First National Bank, Towanda, Pa.; Winton & Stewart, Ithaca, N. Y.; J. A. M. Passmore, 1125 Arch Street, Philadelphia.

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UNION NATIONAL
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REFERENCES:

American Exchange Bank, Duluth, Minn., and A. J. Sawyer & Co., Duluth and Minneapolis.

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OF DULUTH, MINNESOTA.

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 A. R. MACFARLANE, *Manager.*
 JAMES C. HUNTER, *Cashier.*
 ROBERT CROMBIE, *Assistant Cashier.*

DIRECTORS.

H. M. PEYTON, J. H. UPHAM.
 GEO. SPENCER.
 M. J. FORBES.
 A. R. MACFARLANE.

Statement of the Condition of the Bank at the close of Business Monday Evening, December 31, 1888:

RESOURCES.

Loans and Discounts	1,271,307 60
Overdrafts	903 58
Real estate	42,000 00
School bonds	3,900 00
Safes, furniture and fixtures	3,500 00

RESERVE—

Due from banks	\$110,048 00
Cash on hand	140,366 39
	\$250,414 39
	\$1,572,025 47

LIABILITIES.

Capital stock paid in	\$ 300,000 00
Surplus and undivided profits	176,612 54
Deposits	952,300 38
Dividends unpaid	60 00
Dividend No. 18	15,600 00
Rediscounts	128,052 55
	\$1,572,025 47

Collections Receive Prompt Attention.

Interest Allowed on Time Deposits.

Business Accounts Solicited. Correspondence Invited.

HENRY H. BELL,
 Manager.

W. B. BELL,
 Asst. Cashier.

JAMES B. HOWARD

ALEXANDER H. DAVIS.

ESTABLISHED 1877.

Bell & Eyster's

B A N K.

3 WEST SUPERIOR ST.,

DULUTH, - MINN.

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Safety Deposit Vaults.

ASSOCIATE BANK:

HENRY H. BELL & CO., BANKERS,
 West End, Duluth, Minn.

HOWARD & DAVIS,

Loans and

Investments.

Room 305 Duluth Nat. Bank Building.

Mortgages, Bonds, and Commercial Paper. Special attention given to investment of funds in Duluth First Mortgages for Non-Residents.

References: Paine & Lardner, Bankers; Duluth Union National Bank.

DULUTH, - MINN.

M. S. STEWART, Jr.

C. A. BRITTS.

STEWART & BRITTS,

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Transact a General Banking and Exchange Business.

DULUTH.

MINNESOTA.

A. L. ORDEAN, Pres. H. A. SMITH, Cashier.
A. S. CHASE, V. PRES. W. MARSHALL, Asst. Cash.

F. W. PAIN,
LATE CASHIER DULUTH NAT. BANK,
W. P. LARDNER, Duluth.

CAPITAL, - \$200,000

Merchants National

BANK,

DULUTH, - MINN.

DIRECTORS:

A. W. Wright, Saginaw, Mich.
A. L. Ordann, E. G. Swanstrom,
D. G. Cash, A. S. Chase,
F. A. Clarkson, W. C. Sherwood,
H. A. Smith

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National Bank of Illinois, Chicago.
Bank of Minnesota, St. Paul.

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GROCERIES

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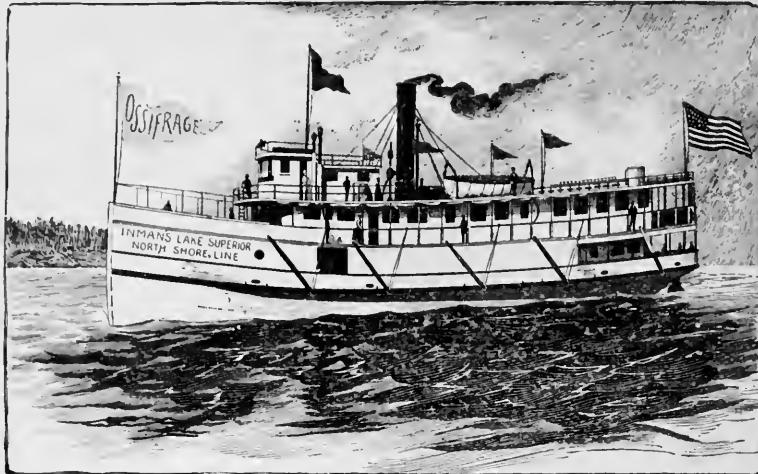
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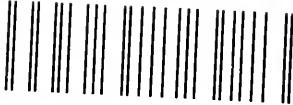
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